THE BOSTON

MEDICAL AND SURGICAL

JOURNAL

GEORGE B. SHATTUCK, M. D., EDITOR
ABNER POST, M. D., ASSISTANT EDITOR

VOLUME CVIII.

JANUARY—JUNE, 1883

BOSTON
HOUGHTON, MIFFLIN AND COMPANY
The Riverside Press, Cambridge
1883

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Lectures.

ON OVERWORK AND STRAIN OF THE HEART.[1]

BY PROFESSOR GERMAIN-SÉE.

Member of the Academy of Medicine, Member of the Faculty of Medicine, Paris, France.

Gentlemen, — I shall treat in this lecture of an asthenic functional malady of the heart resulting from overwork of that organ, and known as heart strain, or acute asystolism.

CAUSES OF HEART DISEASE OTHER THAN VALVULAR LESIONS.

The labors of Laennec and Bouillaud directed somewhat too exclusively the attention of physicians to the valvular lesions of the heart, and their stethoscopic signs; as a result, one entire side of cardiac pathology, whose importance cannot be denied, has been too much neglected. Do not understand me as disparaging the immense services rendered by auscultation, or the importance of the doctrine of valvular endocarditis in the study of diseases of the heart. But I do insist that you shall rightly understand that the valvular lesion is after all only a menace, that it has no gravity except in relation to its possible consequences, and that these consequences may result from other causes just as surely and as fatally. "We often meet," says Beau in his Treatise on Auscultation, "diseases of the heart characterized by rational symptoms the most positive, and whose gravity augments to the end, and the autopsy discloses no lesions which sufficiently explain the observed symptoms and the death." We know at the present day that we need not limit our search for those lesions to the heart itself, and that if the diseased heart acts injuriously on the organs to which it sends blood, the primitive morbid alteration of those peripheral organs may have a no less disastrous influence on the centre of circulation; that, in a word, asystolism — a condition in which the heart is overcome — may be the consequence of a pulmonary, hepatic, renal lesion, as well as of a valvular lesion. This is not all; apart from all these peripheral causes, the cardiac malady may be definitely constituted as a temporary or permanent affection by the simple fact of an excess of work of the muscle, — by exhaustion of the myocardium. Here, then, are pathological states which deserve to be pointed out to you, and which should be studied along with the anomalous forms of heart diseases.

INFLUENCE OF PULMONARY LESIONS.

The sympathy which exists between the lungs and the heart did not escape the ancient authors. "Every cause," says Kreysig, "which troubles the respiration, whether it consist in a mechanical impediment outside, or in a disease within the respiratory organs, must necessarily disturb the healthy action of the heart, not only by modifications effected in the influx and efflux of blood, but also by changes in the chemical constitution of this fluid, or in both ways at the same time." And further on he adds that diseases of the lungs have an influence perhaps greater on the heart and pulse than diseases of the heart itself. This proposition will not probably be deemed an exaggeration, if it be remembered that the greater part of chronic affections of the lungs — phthisis pulmonalis excepted — give rise to symptoms of the forced heart, and often terminate in asystolism. This is what you will observe in chronic pulmonary emphysema, chronic bronchitis, and dilatation of the bronchi.

INFLUENCE OF PLEURAL LESIONS.

The influence of lesions of the pleura is less understood. Sénac remarked that pleurisies augment the volume of the heart. "I have often observed," says he, "that the right auricle and ventricle undergo considerable hypertrophy after such diseases." You can readily understand how extensive pleuritic adhesions, by hindering the expansion of the lung, and, consequently, the free distribution of the blood by the pulmonary artery, may after a while induce cardiac dilatation, and act in the same way as sclerosis of the pulmonary tissue itself.

INFLUENCE OF RENAL AFFECTIONS.

That there is a marked relationship between lesions of the left heart and renal affections, and especially interstitial nephritis, has been proved by Bright, and subsequently by Traube. This relationship explains a certain number of cardiac troubles, in which all signs of valvular lesion are absent. These are sometimes phenomena of cardiac erethism, sometimes symptoms of asthenia and exhaustion.

You will hear patients complain of shortness of breath, of being oppressed after the least exertion, of having a continual sensation of weight in the precordial region, of the occurrence of sudden violent attacks of palpitation; the pulse is sharp and vibrating, the heart voluminous, the shock of the apex very low down and very strong. You would naturally suspect the existence of some disease of the orifices and the cavities, and yet auscultation reveals no abnormal bruit either at the base or apex. Under these circumstances you ought to inquire if you have not here to do with cardiopathy of renal origin, and the existence of polyuria (especially in the night time), the presence of a light opalescent cloud of albumen in the urine, the detection at a given moment of the sign indicated by Sibson and Potain, the *bruit de galop*,[2] will help you to a correct diagnosis.

In other circumstances it is to the congeries of symptoms known under the name of *the forced heart* (cœur forcé) that the renal lesion gives rise. I have alluded to this subject in my lectures on cardiac dyspnœa,[3] and shall not repeat what I then said. These cases are always hard to diagnosticate, and to know whether you have to deal with a primitive or a secondary affection of the heart is often impossible.

INFLUENCE OF HEPATIC DISEASE.

The same symptoms of forced heart, whose anatomical expression consists in dilatation of the cardiac chambers, are observed also as a consequence of disease of the liver. Stokes in his remarkable work has clearly indicated this fact: "When there is com-

[1] Delivered in La Charité and translated, with permission of the author, by E. P. Hurd, M. D., Newburyport, Mass.

[2] [A reduplication of the systolic sound of the heart (sometimes heard even when the heart is healthy). Potain, in cases of hypertrophy of the heart from renal degeneration, has met with and described a variety of double first sound in which, besides the two normal sounds, a third was heard coming immediately before the first sound, and separated from it by a short pause. This presystolic sound is supposed to be due to contraction of the hypertrophied auricles and increased tension of the auriculo-ventricular valves. — Trans.]

[3] Germain-Sée, "Maladies du Cœur et en particulier de leur Formes Anomales." O. Dorn, Paris, 1883, Chap. II.

plication of an hepatic affection, mercury acts with singular efficacy. This is not easy to explain. You are often ignorant whether the disease originated in the liver or in the heart. It is certain that when these affections are combined the two diseased organs react mutually on each other; whatever perturbs the one determines in the other new troubles." [1]

In the observation of Professor Colles, of Dublin, which Stokes relates with minute details, the autopsy disclosed extreme dilatation of the cavities of the heart without any valvular lesion. The liver, without any excessive increase in volume, extended below the border of the false ribs, was of deep mahogany color, was intensely congested and tumefied, and its surface was rough and granular. The dilated veins let escape a large quantity of dark blood. The gall-bladder contained thirty biliary calculi of moderate size.

It is to such facts as these that Professor Potain has recently called attention. Gangolphe and Fabre had described, as accompaniments of jaundice, certain cardiac troubles which they ascribed to the action of biliary salts — retained in the blood — on the fibre of the myocardium. In the cases observed by these writers there was a slight increase of the precordial dullness, a systolic souffle at the apex, and often exaggeration of the second sound a little above the nipple. Potain thinks that these cardiac troubles may arise as a temporary disorder in acute affections of the liver, or as a permanent disorder in chronic affections of that organ and become the origin of a veritable organic lesion of the heart. The right auricle and ventricle naturally first suffer dilatation, and this makes itself manifest by an increase of the transverse dullness, and by a *bruit de galop* having its seat along the right border of the sternum, and which Potain calls *bruit de galop* right, to distinguish it from the *bruit de galop* of the left side of the heart, which occurs in interstitial nephritis. The judicious physician of the Hôpital Necker does not, moreover, attribute directly to the liver a mechanical action on the right heart. In his opinion the hepatic lesion acts by irritation of the medulla oblongata through sensory branches of the *par vagum* going to the liver; the irritation is reflected from the medulla upon the pulmonary circulation, causing augmentation of pressure in the blood-vessels, and this results in dilatation of the cavities of the right side of the heart.

INFLUENCE OF GASTRIC AND INTESTINAL DISORDERS.

It is not alone in affections of the liver that this dilatation is seen; diseases of the stomach and intestine may give origin to similar troubles. It is well known that a great many dyspeptics suffer from palpitations, and have an intermittent and slow pulse. Enteritis and diarrhœa affect the heart similarly. Out of two hundred cases of irritable heart reported by Da Costa [2] during the war of the American Rebellion, sixty-one were due to intestinal derangement. M. Tessier, of Lyons, has reported a number of cases of the same kind. M. Potain has noted, as a phenomenon of the same order, a temporary dilatation of the right heart, which he explains by the same reflex mechanism as the dilatation of hepatic origin.[3] Can this temporary dilatation eventuate, in the long run, in true asystolism? There is nothing at the present time which justifies a positive affirmation on this subject.

It is apparent from what has now been said that in the absence of valvular lesions to account for certain cardiac troubles attended with dilatation, we may find in certain lesions of peripheral organs an adequate cause. I am not now going to speak of other alterations, whether of the myocardium, the pericardium, or the aorta, which are competent to produce the same effects, and this without the presence of any murmur appreciable to auscultation.

PRIMITIVE DILATATION AS A RESULT OF OVERTAXING THE HEART.

Does there exist, independently of these known causes, a dilatation, *quasi* spontaneous, of the heart, eventuating under the influence of over-exertion of the myocardium? Is it possible that this primitive dilatation may determine hypertrophy, and, in time, all the signs and all the consequences of valvular lesions? Such is the new problem presented to our consideration by the observations and the monographs published during the last ten or twelve years in England, in America, and in Germany.

Peacock, from observations of Cornish miners, was the first to point out the existence of dilatation and hypertrophy of the heart, uncomplicated or co-existing with mitral incompetency, and undergoing development in a great number of workingmen.[4] It was impossible to attribute these lesions to any other cause than exhaustion by excessive and prolonged toil. In his opinion these cardiac alterations were the result of overtaxing the heart. Several years later Clifford Allbutt, from an experience similar to that of Peacock, among a heavily laboring population of miners, forgemen, porters, etc., confirmed Peacock's observations. In individuals still young, who had never been exposed to any of the habitual causes of heart disease, he witnessed the development, first of all, of trifling cardiac ailments, such as palpitations and shortness of breath;

[1] Stokes, Treatise on Diseases of the Aorta.

[2] [Da Costa, Irritable Heart. (American Journal Medical Sciences, 1871, page 17.)

Lecorché (Études Medicales, Paris, 1882, page 440) makes some very judicious remarks *à propos* of this form of cardiac disorder, for which Da Costa's name, "irritable heart," is not a bad one. He says "it is possible that forced marches, excessive fatigue, etc., may produce temporary cardiac troubles in debilitated subjects, troubles which one may properly refer to a transient dilatation of the heart, but it is not shown that in absence of all lesion of the myocardium, these disorders may end in a permanent cardiac affection. If, on the contrary, the cardiac muscle is enfeebled as a result of some alteration in the quality of the blood or disease of its nutrient arteries, you may see supervene, generally in subjects of a certain age, as consequence of fatigue, excessive work, excess of coitus, violent emotion, a mild attack of bronchitis, etc., all the symptoms of asystolism without any valvular lesion.

In questions of ætiology, Lecorché remarks further on, the complexity of causes hardly ever permits from an impartial observer an absolute solution.

He reports two interesting cases. The first patient had been of intemperate habits. He entered the Hôpital Dubois for severe functional (?) heart troubles: shortness of breath, palpitations, thoracic oppression, and cough. There was a rapid increase of dyspnœa, and anasarca of the lower extremities supervened; there was also some pulmonary œdema, but no ascites. The asystolism became of a most marked character; complete arythmia. There was some increase of dullness transversely. No murmur. The patient died in a coma. Although Lecorché regards this as a case of "forced heart," resulting from painful emotion (grief from family losses), it seems probable that an autopsy would have revealed valvular lesion, and had the patient come earlier under observation a murmur would doubtless have been heard.

Case II. is described as a cardiac affection of nervous origin; "forced heart," without valvular lesion, consequent on violent anger. The symptoms resemble those of the previous case, though the dyspnœa was more paroxysmal; there was no œdema; asystolism was very marked. One feature of this case was the occurrence of frequent syncopal attacks. This patient, like the former, had been a hard drinker, and there was evidently atheromatous and fatty degeneration.]

[3] See in this connection the thesis of his pupil, Destreaux, Dilatation of the Heart, of Gastric Origin. (These de doctorat, Paris, 1879.)

[4] [Vide Croonian Lectures, Lancet, 1865. TRANS.]

then, coincidently with repetition and aggravation of these symptoms, he noted a slight increase of precordial dullness, due to commencing dilatation; finally the dilatation became more marked, and was accompanied with compensating hypertrophy. Clifford Allbutt, like Peacock, referring these cardiac troubles to the habitual conditions of life of these patients, did not hesitate to attribute the cardiac dilatation to a veritable exhaustion of the myocardium, which, by virtue of over-exertion, had become incapable of performing its ordinary tasks.

Similar facts have been observed by Thurn and Fraenzel in the German army, by Myers in the English army,[1] by Da Costa in the American army. All these writers are agreed that an acute dilatation of the heart, resembling by functional and physical signs a valvular affection in its first stages, may manifest itself suddenly, especially in young soldiers, as a result of overwork and forced marches.

Seitz, pupil of Professor Bienner, in his thesis on the effects of overwork of the heart, has described the same group of morbid phenomena; his description (which I need not here reproduce) is trait for trait the remarkable tableau, painted by Beau, of asystolism. The only apparent difference is furnished by the necropsy, which discloses the absence of all lesion of the endocardium, pericardium, aorta, and other organs capable of explaining these cardiac phenomena. And yet Beau did not fail (as I have before remarked) to indicate such cases of asystolism where the lesions found at the autopsy are insufficient to explain the symptoms observed and the fatal termination.

There is, then, really nothing new in these facts except the interpretation which writers who have noted them have given, and the consequences which they have deduced from them. These writers have not been content to attribute these asystolic troubles to exaggerated fatigue of the heart. They have made them act a pathological part in the development of certain valvular affections. The cardiac dilatation produced by exhaustion of the myocardium is followed by hypertrophy, then by a series of lesions pertaining to the aorta and the orifices of the heart. This is the way in which Clifford Allbutt demonstrates the order in which the chronic morbid changes present themselves: —

(1.) Dilatation of the right heart. (2.) Dilatation of the left heart. (3.) Hypertrophy of the left vent tricle or of both ventricles. (4.) Chronic inflammation of the aorta and aortic valves. (5.) Dilatation of the aorta. (6.) Incompetence of the aortic valves. (7.) Compensatory hypertrophy of the left ventricle. (8.) Loss of compensatory hypertrophy, and dilatation of the left ventricle. (9.) Consequent mitral regurgitation.

I do not refuse to admit that a sudden and transient dilatation of the right heart may be the effect, in an overworked individual, of an abrupt augmentation of blood pressure in the venous system; I do not dispute the facts observed by Kreisig, Maurice Raynaud, Thurn, Myers, and Da Costa. Clifford Allbutt cites further, as an example of this kind of suddenly forced heart, the following fact which he observed in his own person during a journey in Switzerland: After several days of fatigue, in which he was climbing mountains difficult of ascent, he was seized with a strange shortness of breath accompanied by a very painful sensation of oppression and beating in the epigastric region, and percussion revealed an increase of precordial dullness. These troubles, as well as the increase of dullness, disappeared after a season of repose, but returned as soon as he again undertook to climb the mountains. In the night time he was awakened by an intense dyspnœa and by painful palpitations; the precordial dullness was greater than it was before; full inspirations from the open window calmed this oppression. I believe, with the English author, that these troubles were due to sudden distention of the fatigued right ventricle. But it is difficult for me to admit that without any previous material lesion of the myocardium this dilatation may become, by the sole fact of exhaustion of the cardiac muscle, the origin of organic lesions of the heart. It must not be forgotten that if the miners and laboring men of Peacock and Allbutt were subjected to arduous and prostrating toil, they were also, by that very fact, predisposed to seek in alcoholic stimulants (in which, in all likelihood, many of them freely indulged) a solace for the fatigue and misery of their condition. I attribute, then, to alcoholism, of which it does not seem that those writers made sufficient account, an undeniable action on the nutrition of the cardiac muscle, and this would explain the valvular lesions of many of the cases which they have noted. That, under these conditions, the muscle of the heart, altered by alcohol, should give way amid the general prostration of the vital powers is not at all astonishing, but the mechanism of this dilatation does not appear to me to differ essentially from that which we observe in dilatations by any cardiac lesion whatever, and it seems useless to me to make of this variety of asystolism a separate disease.

TREATMENT.

It is not in our power to lay down any precise rules of treatment of a malady whose nature we are just beginning to investigate and understand. First and foremost, repose and the proper diet to promote recuperation are indicated; the rest is uncertain.

[1] [Myers, Diseases of the Heart among Soldiers, Churchill, 1870.]

Original Articles.

ON SUDDEN DEATH BY THE ENTRANCE OF AIR INTO THE UTERINE VEINS.[2]

BY F. W. DRAPER, M. D.

The practice of obstetrics is acquainted with many special risks to the two lives which depend on its gracious service; but it knows of no incident of the lying-in room so deplorable as the sudden death of the woman recently delivered. In the whole range of midwifery experience hardly anything so appalling can happen. Ordinary emergencies, like hæmorrhage, eclampsia, and placenta prævia, are not without some premonitory hint or warning to convey to the alert attendant the message which may suggest or guide his action. But here, death overwhelms the victim when all seems serene and without token of catastrophe. The woman has passed her travail, her fears have been supplanted by happy fruition, her delivery is complete in more than the obstetric sense, and she looks forward to a future full of hope. In a second all is changed; almost before she can define her feelings of distress and dread, or summon help, the woman is dead. In whatever manner the change comes, whether it be by

[2] Read before the Obsterical Society of Boston, December 9, 1882.

syncope, or by pulmonary or cardiac thrombosis, or by the mischief of a wandering clot, or by the admission of air to the circulation, the stroke is fearful in its unheralded suddenness and its quick fatality.

But that which carries consternation and grief under the ordinary conditions of the lying-in chamber becomes sometimes a fortunate medico-legal accident. A woman seeks the aid of an abortionist to assist her in destroying the life of the child within her womb. She narcotizes her conscience by specious falsities, so that, to her, the act of killing in which she engages with her accomplice does not carry with it any quality of crime, and she readily takes whatever physical risks pertain to the wretched business. If, then, in consequence of the abortionist's manipulations, death suddenly overtakes the passive partner in the crime in the course of the unlawful operation to which she has submitted herself, leaving the other, the active agent, to be easily detected in the midst of his work, *flagrante delicto*, it is an opportunity which, if well improved, makes the dead woman a better witness against her accessory and herself than she could possibly be if living.

I offer the following cases as contributions to the somewhat scanty material which medical literature has accumulated in illustration of one variety of the sudden deaths to which I have referred, namely, as examples of those caused by the entrance of air into the circulation through uterine sinuses, freshly and forcibly opened. The general subject is still somewhat novel, while the infrequency of opportunities to investigate unequivocal cases of this kind with satisfactory fullness, justifies the presentation of those instances which have been the occasion for careful inquiry.[1]

CASE I. Minnie A. F., a married woman, twenty-three years old, whose marriage obligations had not controlled her chastity, was found dead late in the afternoon of July 2, 1881, in a bedroom of a house of ill-repute. She had come to the house in the middle of the previous night in company with a man, her paramour, and had passed the night there with him. In the morning the man went out, leaving the woman in the room, where she was seen, two hours later, by the housekeeper, alive and in bed. Just before noon the man returned and went to the room, remaining there about five minutes. As he went down stairs to go out he was observed to look about furtively as if desirous to elude notice. Two hours later he was readmitted to the house, and again he went to the room; he made a short stay, not more than five minutes, then disappeared from the premises for good.

At half-past six in the evening, the housekeeper went to the room to do the chamber-work, believing that the apartment was now vacant. She found the door unlocked, and, on entering, discovered the dead body of the girl in bed. When I saw the body, an hour later, there was nothing in its appearance or surroundings to suggest the cause or the manner of the death. The position gave no indication of violence or pain. The body lay in bed, turned a little on one side, the extremities disposed naturally as in sleep; a sheet and covelet were over it, and a chemise and stockings were the only articles of personal clothing upon it. The exposed parts — the face and upper extremities — were cold; the parts protected by bedclothing were cool, but still retained an appreciable degree of animal heat. Cadaveric rigidity was well developed, and there was an unusual amount of lividity about the face, neck, and dependent parts. The day had been hot. Considering all the data together, it seemed probable that the death had occurred about eight hours before the inspection of the body, or, in other words, coincidently with the man's morning call.

The body was removed for the purpose of determining by autopsy the cause of the death. And, to anticipate a little at this point, it may be stated that the autopsy revealed that which made it necessary to find the woman's partner of the previous night. In the course of their search, the detectives learned that, on the day after her death, her paramour, then many miles from Boston, had admitted to a friend that he had just used a catheter on Minnie for the purpose of causing her miscarriage, and when asked how she was, he had replied that "she was pretty well, he guessed." It also transpired that he had left Boston in haste in the afternoon of July 2d, the day of the death. The result was that this amateur abortionist, whose ordinary avocation was that of a village grocer, was arrested, indicted, tried, and convicted, and is now usefully employed at Concord in behalf of the Commonwealth. Of course, in his testimony at his trial, he protested that he knew nothing about Minnie's death; he had left her, he said, in bed, alive and well, but very tired from their previous day's trip to Nantasket. It thus happens that, in this case, we are without important facts which would be of great interest concerning the circumstances of the death, and the symptoms immediately preceding it. The examination of the body, however, left no doubt of the manner of the death, or of the avenue by which death approached, and it seems proper to give the post-mortem appearances with some attention to details.

The autopsy was made at half-past ten o'clock in the morning of July 3d, about twenty-three hours after the assumed time of the death, the body having been kept cool meanwhile. External examination failed to discover any sign of violence, nor were there any of the usual outward indications of pregnancy, such as enlargement of the abdomen, pigmentation of the areolæ, or milk in the breasts. There was no odor or other suggestion of decomposition in any part, external or internal.

The usual primary incision over the sternum revealed a clew to the whole case; out of the cut vessels there issued, instead of the expected drop of blood, a collection of minute bloody bubbles. When the pericardium was exposed by raising the sternum, it was unmistakable that the visible area of that sac in the anterior mediastinum was largely increased and bulging. The right cavities of the heart were distended, and gave to the fingers on palpation and percussion a distinct sensation of gaseous, instead of fluid, contents. A small puncture through the anterior wall of the right ventricle confirmed this impression; at first, a jet of odorless air escaped, followed presently by bloody bubbles, the distended right side of the heart meanwhile becoming flaccid. The left ventricle was contracted and empty. The structure of the heart was healthy.

The blood was dark and fluid; no clots were found in any part.

The inferior vena cava was distended with air throughout its extent, its thin walls rendering its inflated condition plainly visible.

The lungs were moderately reddened throughout

[1] These cases occurred to the writer in the course of his duty as a medical examiner in Suffolk County, Massachusetts, under the statute concerning the investigation of deaths by violence.

their anterior portions, their posterior and inferior, or dependent, parts showing considerable hypostatic engorgement, probably post mortem. Both lungs were crepitant in every part.

The kidneys weighed, the right six and a half ounces, the left seven ounces. They were injected; in other respects they were healthy in their gross appearances. The spleen was enlarged and engorged. The stomach and intestines showed nothing abnormal. The liver was normal in color, volume, weight, and consistency; bloody bubbles escaped freely from its divided vessels.

The pelvic organs presented the following appearances: The womb was enlarged to three times its unimpregnated volume. The veins of the uterine plexus and the iliac veins, especially those on the left side, were seen and felt to be filled mainly with air. The uterine cavity itself gave to the fingers applied externally the sensation of a layer of air outside more solid contents. There was no sign of violence about the external genitals or the vagina. The os uteri admitted the tip of the little finger part way through the cervical canal. Just within the external os the mucous membrane was reddened over an annular area two or three lines wide. When the section which exposed the cervical canal was extended along the front of the body of the uterus, the first cut through the uterine wall gave vent to a distinct puff of imprisoned air. Within the uterus was an ovum of about three months' growth, enveloped in its unbroken membranes. The long diameter of the embryonic sac was two and a half inches. The shaggy coat of the chorion was still present and displayed its typical appearances. The tufts of the chorion were very loosely adherent to the decidua, and the slightest force sufficed to separate the two surfaces. The immature placenta, of the size of a silver half-dollar, occupied a site at the upper and posterior part of the fundus; light pressure upon it gave the characteristic crepitant sign of air between it and the uterine tissue.

The color of the uterus and of its contents was normal, except that at the lowest part of the ovum, just above the internal os and in immediate relation with that orifice, there was an ecchymosed patch or streak, half an inch long and one eighth of an inch wide; at the right and most discolored end of this bruise there was a rent in the decidua, admitting freely, not to the cavity of the amnion, which was still entire, but to the space between the decidua and the chorion, and thus directly to the placental attachment. This rent could not be accurately measured, but its estimated dimensions were one inch in one direction and half an inch in another at right angles. It was evident that some instrument like a catheter had slipped upon the embryonic envelopes, making a bruise, and, instead of rupturing those membranes and setting free the liquor amnii, had glanced aside and torn up the decidual layers. Although no distinct separation of the placenta from the adjacent surface was demonstrated, it was seen that the uterine wall at the placental site was much redder than elsewhere. The cut surface of the uterus displayed many open orifices of divided sinuses.

Except moderate injection of the meningeal vessels and the presence of air-bubbles in the veins emptying into the great longitudinal sinus (which latter appearance might be accounted for in some way other than by the passage of air through the circulation), the brain and its membranes presented nothing abnormal.

Case II. Leontine R. J., aged twenty-one, single, and in good health, died suddenly in a physician's office in the afternoon of October 26, 1881, under the following circumstances: She was between seven and eight months pregnant, a fact which both she and the doctor knew, since the latter had himself determined on the previous 28th of June, to his own satisfaction, that the suppression of the girl's menstruation was due to her conception, which she presently confessed to him. In the first week of October she had told her sister of her pregnancy for the first time, and had said that she was going to have something done, and that Dr. —— was going to do it. The two sisters went to this physician's office in the afternoon of October 26th by appointment. He took the patient into an inner room, where there was a single bed suitable for gynæcological examinations. The sister remained in the larger room adjacent, and was so seated that she could not easily see or hear what transpired. It did not appear that any particular privacy was sought by the doctor or his patient; it was probably well known for what purpose the consultation was appointed, or, if not so, it was fully understood that the small room was designed and set apart for the physical examination of women, and all that was done there was recognized as in the line of the doctor's specialty by the servants as well as by callers at the house, — a bit of shrewdness which abortionists in general might find it profitable to copy. What occurred in the little bedroom is known only so far as it was described by the doctor at and before his trial; the missing links in the narrative must be left to the imagination or to logical inference. The following is a transcript of notes of the defendant's statement on the witness stand:[1] "Leontine said she wanted to talk with me, as she was not feeling well. As her sister was with her, I took Leontine into the little room. The sister took a seat in a large chair in the office. Twice or three times I went out. Leontine's drawers were off when I last went back to the room; I don't know when she took them off; I did not direct her to remove them. She complained of lassitude and bearing down. I told her I must make an examination. When I entered the room, and was preparing to make an examination, but before I had made any, she fell back in a faint. At my examination I introduced the finger into the vagina to ascertain the condition of the os, — to see if there were ulcerations there. I took no instrument and had no instrument of any kind in the little room." In the course of his cross-examination he declared that he made a digital examination to see if there was danger of a miscarriage; he "just felt around the os, but did not put his finger inside the os."

This account of the case, as given under oath, is not like the story which he related to me at my interview with him immediately after the death of his patient. At this time he said that Leontine went with him into the side-room and sat down with him on the edge of the bed. After being there about fifteen minutes, Leontine suddenly threw her hands above her head and fell back with a low moan or cry, then had a convulsion, with some frothing at the mouth, and became unconscious. At this time he denied making any examination, but declared that he asked questions only. He applied fruitlessly such restoratives as occurred to him; he put ammonia and water in the girl's mouth,

[1] The defense of the accused was conducted with great ability, but the trial resulted in his conviction.

but she failed to swallow the dose; he placed her feet and legs in hot water; and, finally, he attempted artificial respiration with the help of another doctor whom he had summoned, and who found the girl dead on his arrival. Imperfect as this account is of the facts relating to this death, it is still of value in showing the extreme suddenness of the fatal stroke.

The autopsy was made eighteen hours after the death, the weather being cool and the body having been kept in a cold room on a marble slab. Post-mortem rigidity was well marked, and there were patches of cadaveric lividity on the depending parts. There was no odor or other sign of decomposition, either externally or internally; indeed, the deeper parts of the abdomen still retained some warmth. The eyes were closed; the pupils were equal and measured three millimetres in diameter. The enlarged belly, the full breasts, the deeply pigmented areolæ, the presence of milk in the nipples, the firm tumor within the abdomen with its upper border just above the navel, — these were the indications of the pregnancy which the patient had conceded. About the fourchette, on the perinæum, along the nates, at each side of the perinæum, and on the clothing in immediate relation with these parts, there were blood-stains.

The primary incision along the sternum set free bloody bubbles from the openings of the divided vessels. When the sternum was raised the pericardium was seen to be very prominent, the edges of the lungs being quite widely parted in front. The right cavities of the heart were fully distended; to the touch they gave a sensation of elasticity difficult to describe, and on deeper pressure they conveyed a slight crepitant feeling. When a small puncture was made in the anterior wall of the right ventricle air escaped in a free jet, and without any perceptible odor. As the walls of the auricle and ventricle collapsed, bloody bubbles exuded upon the application of the slightest external pressure. The left ventricle was firmly contracted and empty. The superficial veins of the heart contained interrupted columns of air and blood. The size and structure of the heart were normal, and wholly disproved the theory of the patient's physician that her death was due to "heart disease." The blood was dark and fluid. The lungs were hyperæmic, the posterior and inferior portions especially so. The bronchial mucous membrane was injected. There were no sub-pleural punctate ecchymoses.

The kidneys were injected, but showed nothing abnormal in other respects. The liver was healthy; air-bubbles issued from its cut vessels. The veins of the mesentery contained air in abundance. The inferior vena cava held very little blood, but was seen and felt to be filled almost wholly with air.

The brain and its membranes presented nothing remarkable beyond the presence of air in the meningeal veins and in the venæ Galeni.

Before removal of the pelvic organs from the body, the uterus was carefully examined *in situ;* its enlarged size permitted satisfactory inspection. Its color anteriorly was normal, but its left lateral and posterior regions were injected. The tortuous venous sinuses could be distinctly traced in the uterine tissue, standing out prominently in all directions; they were not corded and tense as if over-distended with blood, but were yielding and elastic. Upon palpation the left lateral region of the womb gave a distinct impression of a quantity of air collected between the womb and the fœtus, whose limbs could be readily felt through the enveloping uterine walls and amniotic sac. The left utero-vaginal plexus of veins was fully distended with air, and the superficial veins of the body of the womb were seen to be similarly filled.

The uterus, rectum, vagina, and bladder having been removed together, the following appearances were noted: At the upper or sub-pubic margin of the ostium vaginæ, near the urinary meatus, there was an ecchymosis, half an inch long and one eighth of an inch wide, and readily referable to pressure by an inelastic instrument upon the tissues covering the pubic arch.

The os externum of the womb admitted the thumb easily. Just within the posterior lip the mucous membrane of the cervical canal was reddened, while the inner margin of the os showed a chain of minute vesicles on a reddened base. The cervical canal contained a quantity of tenacious, blood-stained mucus. The fœtal membranes had been stripped away before death from the left lateral and posterior surface of the womb, involving fully one half of the entire inner uterine area, and leaving a cavity or reservoir which contained air and about four fluid ounces of dark-colored fluid blood. That this forcible separation of the two surfaces had occurred during life was demonstrated by the deeply reddened color of the uterine lining involved in the lesion, and by the following specially significant appearance: upon the inner surface of the womb, posteriorly, there was an ecchymosis, pyriform in general shape, its narrow part at the inner os being half an inch in diameter, its length extending toward the fundus five inches, and its widest part at its upper limit an inch and a half. This ecchymosed area, taken in connection with the bruise at the upper part of the vaginal outlet, and the limited reddening of the cervical mucous membrane, offered but little difficulty for its explanation; nothing could account for it so well as that a sound or catheter or other similar instrument had been introduced through the os uteri, and instead of penetrating the fœtal sac had slipped backward and downward, passing between the membranes and the womb, whose opposing surfaces were violently separated thereby. But the mischief did not end with this forcible sundering of adhesions not yet mature for divorce. In every part of the denuded uterine surface the presence of open sinuses was demonstrable, not only by the escape, on light pressure, of bubbles from their patulous orifices, but by means of a blow-pipe, with which instrument air could readily be blown through the ruptured canals into the external venous plexus.

The amniotic sac was entire; it contained a female fœtus weighing two pounds, and measuring fourteen inches; its development was normal in all respects. The placenta was attached at the fundus, a little to the right of the centre, and out of reach of the violence above described. The uterus measured ten inches in depth, and its wall varied in thickness from a quarter to half an inch. The right ovary contained a small corpus luteum.

These two cases owe their chief interest and significance to their necroscopic appearances, and these appearances invite a few words of comment in conclusion. The necessary limits of this paper will forbid that anything more than a mere outline sketch of the general subject be presented, and many attractive points must be wholly neglected or simply suggested. The most

striking feature which these examinations brought to view was the astonishing volume of air which had entered the circulatory apparatus, displacing the blood, and giving a characteristically inflated condition to the parts chiefly invaded, — the uterine sinuses, the veins issuing from the pelvis, the inferior vena cava, and the right cavities of the heart. It would seem incredible that so great an amount of air could enter the body and be stored up in the circulatory channels in the brief time known or assumed to be included in the entire course of the attack. So, too, the distribution of the intruding agent through the body offers another remarkable feature. The air was not found in the parts nearest its point of entrance only, the pelvic veins and the vena cava, but it had penetrated to the heart and far beyond, and was discovered in situations which it must have reached through the systemic circulation, — in the small vessels of the subcutaneous tissues over the sternum, in the liver and the mesenteric veins, and in the meningeal veins.[1] Such a large volume of air, so widely distributed, suggests the element of time in connection with the fatal process, and gives pertinence to the question, How is it possible that death could follow very quickly upon the first entrance of air into the circulation? The apparent difficulties attending this question are much modified if one or two facts are remembered in their relation thereto. In the first place we are assured by physiologists that the round of the systemic circulation is made with almost incredible rapidity; if we accept the latest views, that the blood completes its circuit in from twenty to twenty-five seconds, we are less embarrassed by this seeming inconsistency of clinical observations and anatomical appearances. Then, again, it is probable that the fatal result, though appallingly sudden, is not actually instantaneous; the patient's apparent death, as indicated by irremediable insensibility and apnœa, is probably attended, in the majority of cases, by an action of the heart, spasmodic and irregular, but continued for some time after the other vital functions have succumbed, and the process of dying seems practically consummated. Erichsen,[2] many years ago, determined this continued cardiac action experimentally, and clinical facts are not wanting to the same purpose. Indeed, in the second of the two cases related in this paper, the attending physician declared that he felt the pulse beating several minutes after the respiration stopped. Moreover, it is probable that restorative measures, like artificial respiration, might help to introduce some further supplies of air into the veins after the natural forces of the body were no longer operative.

But, whatever the difficulties which may be in the way of a full explanation of the post-mortem appearances, of one thing there can be no doubt; the presence of so much air in channels normally occupied by blood is the one unequivocal cause of death. Observing the great accumulation of this agent in various parts of the body, and especially in the one part so essential to life (the heart); observing, too, that all the organs are free from disease or decomposition, and present no departures from the normal condition other than those pertaining to recent and grave disturbance of the general circulation, the examiner can have no hesitation in reaching his diagnosis of the cause of death. And it is interesting to remember that by whatever venous channel the air has found its way to the heart, the result is the same, and the appearances are identical. Whether, through a surgical mishap, a vein in the neck, or in the axilla, or about the shoulder has been divided, whose anatomical relations have kept its walls open and free to admit the air; or the recently delivered woman rising abruptly from her bed has given an entrance to the atmosphere through the patulous mouths of her uterine sinuses by her change of posture; or the same canals have been exposed to the same accident through the manipulations of the abortionist, as in the instances above reported; or the gynæcologist, endeavoring to dislodge or simply to explore a fibroid tumor growing in the attenuated uterine wall, has the misfortune to produce a favoring solution of continuity, — in all these cases the appearances left in the body by the fatal intrusion of air are essentially the same in character and degree; and of all these appearances, the inflated state of the right auricle and ventricle are the most significant and uniform. Nysten, whose observations and experiments on this subject were careful and exhaustive, declares that when death is the speedy consequence of the entrance of air into the organs of circulation, the right auricle is always found distended with frothy blood;[3] and Amussat, in a report upon the introduction of air into the veins, which he read before the Royal Academy of Medicine in Paris, uses this very decided language with reference to the state of the heart:[4] "We invariably find the right cavities of the heart distended." Nearly all the later authorities whom I have been able to consult concur in this regard, so that we may consider this easily recognized condition as a reliable characteristic sign of this form of death.

(*To be concluded.*)

[1] It is possible that the air-bubbles in the meningeal veins were formed when the calvaria and dura mater were removed; this possibility will be the more readily admitted since it reduces by so much the difficulty of accounting for air in vessels remote from the heart, and on the wrong side of that organ.

[2] Edinburgh Medical Journal, January, 1844, vol. lxi., page 1.

[3] Recherches de Physiologie et de Chimie Pathologique.

[4] Archives Générales de Médecine, January, 1838, page 115.

RECENT PROGRESS IN SURGERY.

BY H. H. A. BEACH, M. D.

STRICTURE OF THE ŒSOPHAGUS.[5]

Mr. T. Holmes reports the case and discusses the advantages of gastrostomy and œsophagostomy (so called to distinguish the operation from the ordinary one of œsophagotomy for the purpose of removing foreign bodies). The disease was thought to be epithelioma, probably infiltrating the œsophagus and spreading into the tissues external to the larynx. It was also thought that the œsophagus could be opened below the tumor. The operation was almost bloodless; some difficulty was experienced in attempting to separate the trachea from the œsophagus. The thyroid body was the source of some embarrassment on account of its size and vascularity. The patient sank on the third day after the operation, although he had been fed with perfect comfort every three hours, and later more frequently. Very little food was rejected. He was conscious and free from pain.

At the post-mortem examination all the parts about the wound were found perfectly quiet, and union seemed to be going on well. In reviewing the details

[5] London Medical Times and Gazette.

Mr. Holmes concludes that the operation was justifiable, and that it might have been successful in its object. Upon the question of dilatation he remarks as follows: "To irritate a cancerous stricture (as I believe this was) by frequent passage of instruments can only do harm. Thus Billroth says, the daily dilatation with the bougie for carcinomatous strictures is the only thing that we can do to preserve the patient from death by starvation. I am certain, however, that this daily stretching and irritation of the carcinoma hastens its softening. We have now learned that the œsophagus will, at any rate sometimes, tolerate the prolonged retention of a tube; but in the case before us, the passage of the tube having been found impracticable without a dangerous amount of force, there remained only the alternative between opening the stomach or the œsophagus, if anything was to be done. Now the opening of the œsophagus seems to me a much less dangerous operation, if once its anatomical difficulties are got over, and I am confirmed in this opinion by the experience of cases of cut-throat.

"It is not possible to be sure of the extent of the disease in the œsophagus; and though of course an opening might possibly be made through a part infiltrated with disease, yet such a proceeding would be very unsatisfactory. The proximity of the recurrent laryngeal nerve is another element of danger, though I do not think it is a serious one. And so is the presence of the numerous vessels of the thyroid body. These dangers are best avoided by great deliberation in the dissection, so that the nerve, if seen, can be drawn aside, and the vessels ligatured in two places and divided, as was done in this instance. Another objection is the difficulty that may exist in drawing up the œsophagus to the skin, — a difficulty which was found in this case insuperable (I see that it was the same with Mr. Reeve's case). How far this would have proved an obstacle to the successful treatment of the case, the man's death on the third day prevented me from judging. It was my intention to leave the india-rubber canula in position for at least a week; and I hoped that by that time the parts would be sufficiently consolidated to allow us to change it for another without any trouble, and so that the man could wear the canula permanently and thus easily feed himself.

"On the whole, the case convinced me of the feasibility of the treatment, and has led me to think that it is superior in many respects to gastrostomy, though its range of application may be more limited. Further experience will no doubt soon show surgeons what the relative merits of the two operations are."

LIGATURE OF THE INNOMINATE.[1]

Mr. William Thompson, of Dublin, furnishes the following particulars, which conclude the history of his very interesting case of aneurism: "My patient," he says, "died on the forty-second day after ligature of the innominate. There was no recurrence of bleeding after the thirty-ninth day. The sinus was found to terminate in an ulcer which involved the anterior wall of the junction of the subclavian, carotid, and innominate arteries. The innominate and carotid arteries were filled with clot; the subclavian contained a clot occluding it to the extent of half an inch. The position of the ulcer was on the distal side of the ligature, the constricted portion of the innominate not being involved. The hæmorrhage had apparently taken place from the innominate, as there was a recent blood-stain on the cardiac side of the clot. None of the vessels were pervious to water forced in with a syringe. The aorta was atheromatous. Consolidation was proceeding satisfactorily in the tumor. This is the second longest survival (except Smyth's case, which recovered) on record, Graefe's case having reached the sixty-seventh day, and Cooper's the thirty-fourth."

[1] London Lancet.

SYPHILIS CONVEYED BY SKIN GRAFTS.[2]

The case occurred in Paris, and is reported by M. Féréol.

"The patient was a man aged forty-nine, who had not had any venereal affection, and who had a large wound caused by erysipelas, with sloughing. Seventy-five dermo-epidermic grafts were put on, nearly all of which "took," and cicatrization was rapidly effected. A month after the application of the first grafts the cicatrix began to ulcerate in several places. Six weeks later an abundant roseolous eruption broke out over the body, and a month later mucous patches appeared in the mouth. One of the sons of the man who had furnished grafts on each occasion then consulted M. Deubel for mucous patches about the anus, and stated that eighteen months previously he had had a hard chancre, for which he had not had any treatment. The case is apparently beyond all doubt, and shows the necessity for caution in the selection of persons from whom grafts are taken. The safest rule to follow is, wherever possible, to take the grafts from the person on whom they are to be implanted."

[2] London Lancet.

BORO-GLYCERIDE IN OPERATIVE SURGERY.[3]

Mr. Richard Barwell presented a paper upon this subject at a recent meeting of the British Medical Association, in which he dwelt upon the topical and general poisonous action of carbolic acid. He states that thymol in his hands had entirely failed, and that eucalyptus had not answered his expectations. He had found boracic acid reliable, but very unmanageable. Professor Barf's lecture on the preservative qualities of boro-glyceride suggested its use as a surgical dressing. He reports twelve cases which were good tests of the dressing, and showed it to be a reliable antiseptic. The fact that no spray is required during operating or dressing, and that the latter is so simple and so easily applied, makes the method an attractive one, both for hospital and private service.

[3] British Medical Journal.

CONGENITAL INGUINAL HERNIA IN THE MALE.[4]

"Dr. Kraske gives the following summary of Volkmann's practice with a view to radical cure: —

"(1.) If, in cases of congenital scrotal hernia, the neck of the sac can be isolated, a ligature may be applied around this. In addition to the deligation of the sac, which may be combined with apposition of the pillars of the ring by sutures, the surgeon should also, according to the indications of each case, wash out and drain the interior of the sac, and practice simple transverse section or partial excision of this membrane.

"(2.) The isolation of the hernial sac is very frequently impossible in cases of congenital scrotal rupture. Sometimes the elements of the cord are separated. When the sac cannot be isolated, the surgeon may apply a quitting suture, as recommended by

[4] London Medical Record.

Wahl, or follow Schede's practice, by plugging the ring with a stump of omentum, and subsequently disinfecting and draining the sac. These proceedings, however, can only be applied under certain circumstances. In difficult cases one should consider the advisability of resorting to castration, an operation which may be the more readily adopted the smaller one finds the testis and the older the patient.

"(3.) In cases of congenital inguinal hernia, complicated with incomplete descent of the testis, the surgeon, if the sac — the vaginal process — can be isolated, may ligature the neck of this, cut across the membrane, and endeavor to bring down the testis into the scrotum. If the sac cannot be isolated, then castration should be performed. When the patient is advanced in years this latter operation may be regarded as the simplest and most certain method under any circumstances."

VESICO-VAGINAL FISTULA; COMPLETE CURE WITHOUT AN OPERATION.

This unique case was admitted at the Sussex County Hospital, Brighton, and was under the care of Mr. Powers, who makes the following report of it in the London *Lancet*: —

Patient aged thirty-nine. Ten weeks before admission she was confined for the sixth time; the labor was more difficult than the previous ones, and lasted forty-eight hours; forceps were used. On the ninth day after the operation urine dribbled away for the first time. On admission there was a vesico-vaginal fistula at the very top of the anterior wall of the vagina. The opening was ragged, with cicatricial borders, and large enough to admit the tip of a man's forefinger. A female catheter was passed into the bladder, through the fistula into the vagina. The anterior lip of the os uteri appeared to have been destroyed, and the os uteri itself was left somewhat patent. On July 7th a soft catheter was tied in, and the patient was kept in the prone position. 21st. Owing to obstinate diarrhœa, the catheter has been withdrawn. 24th. The catheter has again been tied into the bladder to-day. 28th. The catheter has slipped out during the night. She affirms that much less urine runs away from the vagina, and also that she has passed several ounces voluntarily at one sitting. 31st. Catheter again tied in.

August 4th. Catheter removed this morning. She says that no urine runs away. 18th. As a small quantity of urine is again escaping, the catheter is to be tied in once more. 20th. The patient is menstruating. The catheter has been removed. No urine escaping. 25th. The patient was instructed never to empty her bladder herself. The urine is drawn off four times in twenty-four hours. She keeps her bed. The sheets are never wet or stained. September 1st. She now gets up, and has complete control over the bladder. 6th. The patient was discharged.

GRAFTING SKIN FROM A RABBIT.[1]

"Dr. Lamallerée, of Paris, has recently employed grafts from the skin of the rabbit to excite cicatrization in the human subject.[2] The patient had suffered for six years from a varicose ulcer of the leg, which had resisted all sorts of treatment. Six bits of skin from the belly (previously shaved) of a rabbit, and two from the skin of the human fore-arm, were grafted on the surface of the granulating ulcer, with the proper antiseptic precautions. At the end of eight days the pieces of skin from the rodent had taken root and were growing, those from the man had not. After eight days more an island of new skin was to be seen (ten centimetres long and seven wide) in the centre of the sore. The healing went on to complete cicatrization, and the newly-formed epidermis evinced no trace of its lowly origin."

OBTURATOR HERNIA.[3]

The case is reported by Dr. Grünberg, of Stralsund. "The patient was a woman, aged sixty-five, who, during the three days before she came under observation, had suffered from well-marked and very intense symptoms of intestinal strangulation. No swelling could be made out at any of the usual seats of hernia, but on close examination it was found that pressure just below the left groin and over the pectineus muscle caused great pain. A vertical incision, about three inches in length, commencing just below the horizontal ramus of the os pubis, was carried downwards at a distance of an inch and a quarter from the outer border of the adductor longus. On exposure of the surface of the pectineus, no swelling nor abnormality was observed, but on raising the outer margin of this muscle, and drawing it inwards, a hernial tumor of the size of a large hazel-nut was revealed. After incision of the wall of the sac on a director a small loop of intestine came to view, which, though very lightly constricted, and of dark-blue color, presented a smooth and shining surface, and had evidently not become gangrenous. For fear of wounding the obturator artery, the pulsations of which could be felt by the finger, the knife was not used for overcoming the stricture. The orifice constricting the neck of the hernia was dilated by the forefinger, being carried along the outer and lower portion of its circumference, and also by breaking down some of the fibres of the obturator membrane. All the symptoms of strangulation ceased immediately after the operation, and on the eighteenth day the patient, though feeble, was regarded as cured. Two days later, however, according to a postscript, she died suddenly with symptoms of collapse, in consequence of perforation of the intestine. Dr. Grünberg states that it is not clear to him why almost all the writers on obturator hernia have reported its diagnosis as being very difficult. He holds that the diagnosis of a strangulated obturator hernia is not more difficult than that of a strangulated femoral hernia. No tumor, it is true, is to be seen or felt, but then there is always characteristic pain. In some instances there is lancinating pain caused by pressure on the obturator nerve. In Dr. Grünberg's case any attempt at active flexion of the thigh excited very intense pain, and the patient complained of constant painful and pricking sensations extending down the inner side of the thigh. This pain, due to the pressure on the nerve, however, is not always felt in cases of obturator hernia, and is frequently complained of by the subjects of uterine disease and also by hysterical women. The characteristic pain of strangulated obturator hernia, and that by which the diagnosis may be readily and surely established, is the tenderness complained of when pressure is made over the pectineus muscle. This tenderness, the region of which is very limited in extent, is so intense that the patient screams when it is excited, and,

[1] London Medical Times and Gazette.
[2] Deutsch Med. Zeit., No. 40.
[3] London Medical Record.

if under the influence of an anæsthetic, shrinks on pressure over this tender part. When this characteristic pain over the locality of the obturator canal can be made out in association with the symptoms of intestinal strangulation, Dr. Grünberg holds that one may safely diagnosticate obturator hernia. On the other hand, in absence of such pain, he would decide with equal confidence against the existence of this affection. Notwithstanding the success that attended non-operative treatment in the well-known case reported by Roser in 1845, Dr. Grünberg would not expect much from the taxis in any case of strangulated obturator hernia, the hernial tumor is so very small, and reflex contraction of the surrounding muscles is so liable to be set up on manipulation. If not strangulated the hernia might return spontaneously under the influence of alternating natural contraction and relaxation of the adductors and flexors of the thigh.

The operation for relief of the hernia when strangulated, if performed early, is free from danger. Dr. Grünberg recommends that in order to avoid bleeding from the muscular vessels, the pectineus, instead of being partially divided, should be raised, and then dragged inwards by blunt hooks. Should the hernial tumor be large, so as to necessitate division of the muscle, it is recommended that it be separated at its origin from the ramus of the pubis by the use of a tenotome. The constriction, it is held, may usually be overcome by passing the tip of the forefinger with a gentle boring movement between the neck of the sac and the membranous portion of the constricting ring, dilatation being effected partly through yielding of the obturator membrane, and partly through tearing of some of its fibres. Hæmorrhage from the obturator artery will be thus avoided. If the superficial incision be made according to Dr. Grünberg's direction there is no danger, he says, of wounding the internal saphenous vein. The incision he recommends is one about three inches in length, commencing just below the horizontal ramus of the pubis, at a point about one inch and a quarter to the outer side of the origin of the stretched adductor longus, and carried directly downwards over the outer margin of the pectineus."

REMOVAL OF THE STERNUM.[1]

Professor König, of Göttingen, related a case and exhibited the patient, after recovery, before the surgical section of the German Association. The bone was removed on account of a sarcomatous growth. In the course of the operation both pleural cavities were opened, also the pericardium, the growth having become adherent to that membrane. The wound was dressed antiseptically, and the only disturbance following was some dyspnœa for a short time. Upon removing the first dressing at the end of twelve days one of the flaps was found gangrenous, and the heart surrounded with pus. The healing process was a slow one.

TREATMENT OF HYDRARTHROSES.[2]

"Professor Volkmann observes that, in reference to a discussion of the subject at the Paris Société de Chirurgie, that both puncturing and washing out the joint, and the double incision and drainage, with the antiseptics, may be declared to be operations unattended with danger, and followed by satisfactory results."

[1] London Medical Times and Gazette.
[2] London Medical Times and Gazette.

ANTISEPTICISM IN OVARIOTOMY.

As bearing upon the question of this dressing in general surgery, Mr. Lawson Tait's report of one hundred consecutive cases, with only three deaths, demands consideration. The operations were performed without any of the Listerian details, and are published in the *British Medical Journal* for October 28, 1882.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

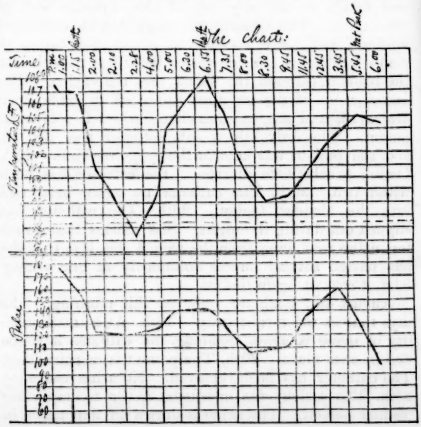
CASES IN THE SERVICE OF DR. GEORGE B. SHATTUCK.

REPORTED BY CHARLES D. SAWIN, MEDICAL HOUSE OFFICER.

CASE I. SUNSTROKE. DEATH.

T. C., a stevedore, about fifty years of age, was admitted to the hospital at one o'clock P. M., July 27, 1882, having lain for a considerable length of time exposed to the sun's rays, and becoming insensible and comatose. Skin very hot and dry. Pupils very much contracted and feebly responsive to light. While on the way to the hospital, and after his arrival, he was subject to constant involuntary dejections, which continued up to the time of his death. Temperature by rectum was 107.4° F., pulse 175, and quite full.

He was immediately submerged in water at a temperature of 80° F., which was cooled down in the



course of thirty minutes to 55° F. At 1.15 o'clock the temperature by rectum was 107° F., and the pulse 160. Five grains of hydrobromate of quinia were now administered hypodermically. Soon he became restless, and more or less force was required to keep him in the bath-tub. At 1.30 the same dose of quinia was repeated, and at two o'clock, after having been in the bath fifty minutes, he was removed, the temperature by rectum being 101.2° F. Pulse showed at this point much weakness. Blankets and heaters were now applied, and the cutaneous surface rubbed vigorously. Temperature continued to fall until it was 95.3° F. Various methods of stimulation, including hypo-

dermic injections of brandy, were now resorted to; soon, however, the increasing heat again manifested itself, and, as seen by the accompanying chart, the temperature rose to 108° F. Heaters were now removed, and patient again immersed in water at a temperature of 70° F., which was, as before, slowly cooled down to 55° F. This time the bodily temperature did not fall so readily, and after forty minutes he was taken out, having a temperature of 104.4° F., which continued to fall until it was 98° F. Pulse 110, and of good quality.

Patient now quite comfortable, and seemed to sleep for a few hours.

An unexpected third rise, however, soon began, and the pulse already was exhibiting many signs of weakness. Tincture of digitalis (fifteen minims) and brandy were now given hypodermically. At five o'clock A. M. (28th) the temperature was 105° F., and on account of the extreme cardiac exhaustion the method of reduction of temperature by the wet-pack was resorted to in lieu of the tub-bath. It proved of little avail, though, for death supervened in the course of half an hour thereafter.

It may, perhaps, be of some little interest to add a table showing the thermal condition of the atmosphere for several days previous to and on the day of the occurrence of the above-described case, as illustrating the fact that the tendency to sunstroke seems to depend rather upon a continuance of a high temperature for several successive days: —

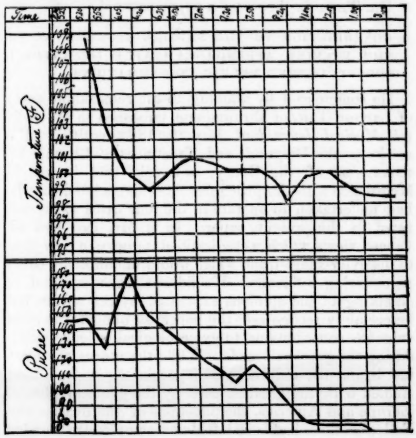
	July 23.	July 24.	July 25.	July 26.	July 27.
Mean temperature.	74°	79°	81°	82°	79°
Maximum . . .	88°	95°	96°	95°	98°
Minimum . . .	62°	67°	69°	71°	68°

CASE II. SUNSTROKE. RECOVERY.

B. R., aged thirty-four, a carpenter by occupation, was compelled by reason of his peculiar work to remain out-of-doors exposed to the sun a great deal, and on August 9th, after having labored till eleven o'clock A. M., was obliged to stop on account of increasing weakness, dizziness, and a tired sensation in his lower extremities. He then went to bed, but he could not sleep, and dressing went out for a walk. What followed he knew little about, but he remembered being on Harrison Avenue. Just previous to the attack he was seized with "a terrible lonesome" feeling, and objects about him seemed to be bluish in appearance.

Admitted to the hospital about half past five o'clock P. M. in an unconscious condition, with pupils dilated, and breathing heavily. Temperature by rectum was 108.8° F., and pulse 145. Patient was placed in a bath-tub, the water in which was at a temperature of 77° F., and at this point the temperature was maintained throughout by means of the addition of small pieces of ice from time to time. In the short space of thirty minutes the body heat as indicated by the thermometer was 103° F., and the patient was then taken out. The pulse evinced much strength and regularity till about six o'clock, when the number of beats increased to 180, although the temperature at this time was nearly normal. Ten minims of tincture of digitalis were given hypodermically, and an excellent result noted shortly afterwards.

There was another slight rise of temperature, but not excessive, as will be seen by the accompanying chart, and sponge baths were given at frequent intervals to prevent such occurring, if possible.



The slight attack of diarrhœa, which was noted on entrance, ceased, the pulse became more natural, and at eight o'clock he became quiet and semiconscious. Slept well after eleven o'clock P. M., though waking occasionally and talking in a rational and pleasant manner. In the morning complained of a feeling of constriction about the head. On the next day fully convalescent. Discharged, well, on the 12th of August.

As in the preceding instance, the accompanying table will furnish facts relative to the condition of the atmosphere: —

	August 6.	August 7.	August 8.	August 9.
Mean temperature . . .	74°	78°	78°	79°
Maximum	97°	88°	92°	89°
Minimum	67°	71°	70°	68°

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

PRESENTATION OF A BUST OF THE LATE PROFESSOR WHITE, OF BUFFALO.

Stated meeting, December 21, 1882. Dr. Austin Flint presented a marble bust of the late Dr. James P. White, President and Professor of Obstetrics and Gynæcology of the University of Buffalo, and a non-resident Fellow of the Academy, on behalf of Mr. James Platt White, the son of the latter. The bust is admirable as a likeness, as well as successful as a work of art, and was executed by J. S. Mitchell, the Rochester sculptor. Dr. Flint was formerly associated with Dr. White in the Faculty of the Buffalo University, and was a life-long friend of his. At the conclu-

sion of his presentation address he proposed a set of appropriate resolutions accepting the gift and returning the thanks of the Academy to the donor, which, after they had been seconded by Dr. T. Gaillard Thomas, in a few eulogistic remarks, were unanimously adopted.

DR. THOMAS then read a paper entitled

A CONTRIBUTION TO THE SUBJECT OF REMOVAL OF THE UTERINE APPENDAGES (TAIT'S OPERATION), FOR RECURRENT PELVIC INFLAMMATIONS.

He commenced by alluding to the remarkable essay of Lawson Tait, of Birmingham, published in the *British Medical Journal* of July 29, 1882, entitled: Remarks on the Diagnosis and Treatment of Chronic Inflammation of the Ovary, and said that it was in accordance with the principles there enunciated that he had undertaken to operate in the four cases to be narrated in the present paper. In it Mr. Tait had advanced views which were destined to open a new field to the gynæcologist, and which would undoubtedly exert an enduring influence. He did not feel warranted in accepting all the opinions expressed by the writer, but he certainly recognized the paper as one of the most valuable contributions to gynæcological science made during the present decade. While the uterus, the uterine ligaments, and the pelvic areolar tissue had been studied with the greatest care by the gynæcologists of Europe and America, the affections of the ovaries and Fallopian tubes had been left almost completely shrouded in mystery, and Dr. Tait had been almost alone in his investigations of this subject. How often had it been found that after a long course of treatment of the uterus, including all the mechanical devices and operative procedures that the most skillful gynæcologist could devise, the condition of the patient remained substantially the same, and the case had to be finally abandoned as incurable. He was glad to say, however, that a wholesome revolution in regard to the attention paid to the ovaries now seemed to be taking place.

Dr. Thomas then proceeded to recapitulate some of the most original and valuable of the points advanced by Mr. Tait, as follows: (1.) Formerly it had been felt that the surgeon was not justified in opening the abdomen for conditions whose severity did not threaten life, and the removal of ovarian tumors was consequently delayed as long as possible by means of mischievous tappings; but now, when the removal of an ovarian tumor was fatal only when the patient had been tapped, or the operation injudiciously delayed, we were justified in performing abdominal section, not merely for the saving of life, but for the relief of suffering. (2.) The usually accepted doctrine of the coincidence of ovulation and menstruation was wholly erroneous. (3.) The ovaries had nothing whatever to do with menstruation; the phenomena of menstruation depending upon the Fallopian tubes, and not upon the ovaries. (4.) In many cases of abnormal menstruation extirpation of the ovaries and Fallopian tubes put an end to the sufferings of the patient. (5.) In chronic ovaritis the tubes were always involved. (6.) In his last thirty-five cases there had been only one death, a mortality of 2.85 per cent. after operation. (7.) Recurrent pelvic inflammations were generally attributable to tubal dropsy and ovarian disease. This last proposition was not found in Mr. Tait's essay, but had been mentioned by him in conversation with Dr. T. A. Emmet, of New York, during the past summer.

The subject at present under discussion, Dr. Thomas went on to say, had nothing whatever to do with the removal of ovarian tumors — the operation in question being performed for the relief of the suffering and removal of the dangers incident to chronic ovaritis and salpingitis, and to recurrent attacks of pelvic inflammation. The history of oöphorectomy was so brief that it might be said to be still in its infancy. It was first performed by Hegar in July, 1872, and five days later by Tait. Neither of these operations was published, and neither operator was aware of the other's having done it. During the very next month, Battey, of Georgia, performed it and published it as an original operation, and to him the credit of the procedure had been justly conceded. The operation to which Tait laid claim was the removal of the Fallopian tubes in addition to the ovaries. This he believed to be essential, because his experience convinced him that salpingitis and tubal dropsy were invariably present in connection with ovarian inflammation, and constituted the more serious trouble of the two.

Dr. Thomas said that he had performed Tait's operation in four cases, but that they were as yet entirely too recent to show permanent results; and he then proceeded to narrate them in detail. The first patient was a negress, thirty years of age, and married, who for a considerable time had had an attack of pelvic cellulitis or peritonitis about once a year, and in consequence had become a chronic invalid. During the past eighteen months she had suffered the most intense pain over both ovaries, and for six months had had profuse hæmorrhage at her menstrual periods. The uterus was found to be large and anteverted. Under the supposition that the endometrium was probably covered with a growth of fungoid excrescences, which gave rise to the menorrhagia, he carefully scraped the uterine cavity with the copper wire curette; but, to his surprise, he found that there were scarcely any of these fungous growths present. He then introduced an anteversion pessary, but this only resulted in positive harm. A more careful physical examination now led him to the conclusion that there was chronic inflammation of the ovaries and Fallopian tubes, and, despairing of affording relief to the patient in any other way, he made an abdominal incision in the median line and performed Tait's operation, the strictest antiseptic measures being adopted, with the exception of the spray. The ovaries were found to be covered with small cysts, while the tubes were enormously distended with fluid, giving them the appearance of sausages, and pouring forth a purulent discharge from their lining membrane. (The specimens were exhibited to the Academy.) The operation was not followed by the slightest unfavorable symptoms, and on the thirteenth day after it the patient sat up. Since then there had been no return whatever of the menstrual flow, and the woman seemed quite well.

The second patient was a lady twenty-five years of age, who had been married three years, and had had one child eighteen months before. Nine months after her confinement she had had an attack of pelvic inflammation (either cellulitis or peritonitis), and had never been well since. She suffered mainly from intense pelvic pain and irregular and profuse menstruation. The left ovary was found to be as large as a hen's egg, and exquisitely sensitive to the touch. An exploratory abdominal incision was made, and both ovaries and both Fallopian tubes being found to be diseased were removed. The operation was a difficult one on account

of the firm adhesions that were present. (These specimens were also exhibited, and the tubes were seen to be greatly enlarged.) The patient made a good recovery, and had not menstruated since the operation.

The third case was that of an unmarried lady of twenty-two. From the age of fourteen, when menstruation commenced, she had suffered from the most extreme dysmenorrhœa. For the past year the pain had been almost constant, although not so severe as at the time of her periods, when it was necessary to semi-narcotize her in order to give her any ease at all. In addition to the pain, she suffered from extreme exhaustion, and her physician stated that sometimes for hours during her periods the pulse was wholly, or almost, imperceptible at the wrist; so that he feared a fatal result. Dr. Thomas removed both ovaries, which were cystic, and both tubes, which were greatly enlarged, and the lining membrane of which was filled with pus; though there was not as much dropsy as in the other two cases. The specimens had, unfortunately, been lost. Since the operation the patient had passed one menstrual period, and there had been no discharge.

The fourth operation was followed by a fatal result; but the patient, who was unmarried and twenty-seven years of age, was in a state of extreme exhaustion at the time. From the age of fourteen she had suffered from severe dysmenorrhœa, but during the last two years she had had in addition repeated attacks of pelvic inflammation, which caused her the most intense suffering. For a month he endeavored to build up her vital powers; but finding this impossible, he decided not to delay any longer with surgical interference, and, accordingly, performed Tait's operation. At the time she looked precisely like a patient in the third stage of pulmonary phthisis, so great was her pallor and emaciation. Her temperature was 100, her pulse 150, and she was harassed by never-ending pelvic pain. The operation was performed on the 11th of December, and was very tedious and difficult, as the ovaries, which were covered with small cysts, and the tubes, which were dropsical, were firmly bound down by false membranes. (Specimens exhibited.) The prognosis was very unfavorable, and within twenty-four hours after the operation an insidious attack of peritonitis, with low temperature and accompanied by little pain, set in, and the patient died on the sixth day.

This, Dr. Thomas said, was all his experience, and he could not but regret that the remote results of his cases were not yet attainable. All that he had done was simply an attempt to uphold the hands of a bold and original investigator. The results of Tait's operations were exceedingly gratifying. In his seventy-five cases there had been six deaths. This embraced his whole experience with the operation. Confining it to the cases of chronic ovaritis he had lost only one case out of thirty-five. Battey had lost three out of fifteen cases, while he himself had lost four out of twenty-one. The fact was undoubted that laparotomy was more successfully performed in Europe than in America, where the operation originated. This was a reproach to American surgeons, and the discrepancy in favor of the European operators was one which could not be met with arguments, and was only to be abolished by results.

There was no discussion of Dr. Thomas's paper on this occasion, but Dr. Emmet, being called upon by the chair to give his impressions of Mr. Tait's methods and opinions, said that in his recent visit to Birmingham, he was not fortunate enough to have an opportunity of seeing Tait operate, but he saw a number of the cases which had been operated upon, as well as the specimens removed, and nothing that he met with abroad had interested him so much and puzzled him so much. In the English surgeon's laboratory there were specimens from about sixty cases in which he had operated during the past eighteen months, and what surprised him most was their large number. Where could so many such cases possibly come from, was the question that puzzled him. He had had the opportunity of examining many dead bodies of women in the hospitals, and he had certainly never met with the condition seen in these specimens more than a dozen times altogether. Mr. Tait told him that he was now accustomed to operate in all old cases of ovaritis and pelvic cellulitis and peritonitis which would not yield to other treatment; but when he asked him what his guide for operating was, he said that he was unable to give any, except to state that if in any such case the patient did not get well after a certain time he made an abdominal incision, when he was almost sure to find a diseased condition of the ovaries and tubes, and what was called in this country thickening of the broad ligament. Among the other patients that he saw was the nurse whose case was described in Tait's article in the *British Medical Journal*, who before the operation suffered so greatly that she could not live out at service, and finally became an out-door pauper. Yet after the removal of her ovaries and Fallopian tubes she never had any more pain, and he had really never seen a finer specimen of a woman. On account of the better results which the English surgeons had obtained in laparotomy, as compared with American operators, he had been interested in inquiring the special reasons for this; but he found that hardly any two of them held the same views in regard to the methods of procedure. Thus, Tait, who was the most successful operator living, rejected Listerism altogether, and was simply careful to have his hands clean when he operated; but the impunity with which he opened the abdominal cavity was certainly most astonishing.

The second paper of the evening was by Dr. Henry J. Garrigues, and was on the subject:—

GASTRO-ELYTROTOMY (THOMAS'S OPERATION), COMPARED WITH OÖPHORO-HYSTERECTOMY (PORRO'S OPERATION).

In the eight cases of Thomas's operation which had been reported, he said, there had been four recoveries of the mothers, while all the children had been saved except two, who were dead at the time the operation was commenced. According to Dr. Harris's statistics, there had been eighty-four cases of the operation of Porro and its modification by Müller, with forty-seven deaths. One of the chief objections to gastro-elytrotomy was, that it was impossible to perform it with a strict observance of antiseptic methods; but he thought this could be obviated if the surgeon were thoroughly to disinfect himself, his instruments, and his patient before the operation, and to see that antiseptic measures were employed after it. Having pointed out that the number of cases was as yet far too small upon which to form any adequate basis of comparison, he took up the dangers of the two operations successively in detail, and came to the conclusion that shock had so far proved the only cause of death in Thomas's operation,

while in Porro's there was imminent danger, in addition to this, from hæmorrhage, septicæmia, and peritonitis. Among the other causes of death in cases of the latter had been tetanus, pulmonary œdema, and embolism. One advantage of Porro's operation was, that it could be performed before the cervix was dilated or dilatable (which was impossible in Thomas's); but this advantage was usually lost by the delay in operating. The former necessarily rendered the woman sterile in the future, while after gastro-elytrotomy there was a possibility of bearing other children. Whether this were an advantage or not was a question upon which medical opinion was at present divided. After speaking of the contra-indications for gastro-elytrotomy, Dr. Garrigues went on to say that in ordinary country practice he thought Cæsarean section was preferable; but if the patient were in a hospital he would select Thomas's operation if the cervix were dilated or dilatable. If this were not the case, he would perform the Porro-Müller operation. He concluded with a summary of the views expressed in the paper.

In the discussion which followed, DR. POLK was the first speaker. The place which he assigned to Thomas's operation was midway between embryotomy and Cæsarean section. It could, of course, never take the place of the latter in any case where the cervix was not dilatable or could not be reached. He then described in a detailed and graphic manner the anatomical relations, the successive steps, and the simplicity of gastro-elytrotomy, and expressed his decided preference for it in all cases were the condition of the cervix rendered it applicable.

He was followed by DR. ISAAC E. TAYLOR, DR. SKENE, of Brooklyn, who had performed Thomas's operation successfully and was enthusiastically in favor of it, and DR. LUSK, who thought that when the cervix was dilated, no other operation could be compared with Thomas's, but that when the case was seen early we needed some alternative. Porro's operation had been weighed in the balance and found wanting, and he thought the old classical Cæsarean section was preferable, especially if care were taken to use sutures in the uterus, the gaping uterine wound having been found to constitute the principal source of danger.

To this DR. GILLETTE replied that he had seen the autopsies after four Cæsarean sections, in some of which he had assisted, and in every one of the cases the uterine wound was gaping notwithstanding the fact that sutures had been carefully applied after the removal of the child. The discussion was brought to a close by the author of the paper.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, RECORDER.

THURSDAY evening, December 14, 1882. The President, DR. JAMES TYSON, in the chair.

A CASE OF MITRAL OBSTRUCTION WITH SEQUENTIAL LESIONS.

Exhibited by DR. E. P. BRUEN.

I submit this specimen because it favorably illustrates the lesion and the sequential changes in the different chambers of the heart. The auriculo-ventricular opening of the left heart is nearly occluded by an epiglottic-shaped enlargement of one of the leaflets of the mitral valve. The valve is very much thickened, and the focus of a considerable calcareous deposit. The orifice during life permitted a reflux of blood from the ventricle into the auricle. The left auricle is dilated and hypertrophied so that its cavity is about twice as large as normal. The right ventricle is very much dilated, the walls of this cavity are less than half the normal thickness, and the ventricle must have had during life twice its physiological capacity. The tricuspid valves were insufficient on account of the dilatation. The considerable enlargement of the left auricle and right ventricle occasioned during life a broadening of the area of dullness on the level of the third and fourth ribs, namely, the apex of the cardiac triangle. It also produced a decided increase in the area of the cardiac dullness to the right of the median line of the sternum. In children the heart with similar enlargement encroaches upon the left pleural cavity to such an extent that the physiological inflation of the left lung cannot occur. Bronchial breathing is produced, audible posteriorly, while anteriorly below the second interspace no respiratory murmur is audible. In these cases, when the complication of bronchitis occurs, the physical signs suggest a pleural effusion. Enlargement of the right ventricle both in children and adults causes a pronounced impulse at the epigastrium, and occasions serious pain and inconvenience. The murmur heard during life in the case from which my specimen was taken indicated this lesion, both presystolic and systolic murmurs being audible. The second sound at the pulmonary artery cartilage was also much accentuated, owing to the repletion of that vessel with blood. The first sound over the right ventricle was very clear and distinct, as is common in these cases, but the first sound at the apex was obscured by the murmur. The patient from whose body these specimens were removed was a woman, aged forty-six years, who had been subject to heart disease since twenty. The immediate cause of death was pulmonary repletion with blood, which induced right heart failure.

Compared with cases of mitral regurgitation, this mode of death illustrates a feature of the clinical pathology of mitral obstruction. In mitral regurgitation death occurs with heart failure, but usually after serious dropsy. In mitral obstruction dropsy is not so prominent a symptom, but the pulmonary engorgement prevents a perfect supply of blood to the aorta. The right ventricle failure in cases of mitral obstruction brings about death in the same manner as left ventricle failure does in cases of aortic obstruction.

PERICARDIAL EFFUSION AND ADHESION OF THE PERICARDIUM TO THE APEX OF THE HEART MISTAKEN FOR HEART RUPTURE.

Exhibited by DR. J. T. ESKRIDGE.

Dr. Eskridge said that in this case the physician making the autopsy actually considered the specimen to be one of heart rupture. The patient was an athletic young man, and perfectly well until a few days before he sought medical advice. He was under treatment for only twenty-four hours, suffering from cardiac pain and great prostration. He died suddenly and unexpectedly when no one was near him. The attending physician, who made the post-mortem examination with no professional assistance, reported effusion in both pleural cavities, the pericardium distended with thin, non-coagulated blood, and a rupture

of the left ventricle. Dr. Eskridge said that a careful examination of the heart, pericardium, adjacent glands, and portions of the larger bronchi showed marked evidences of pericarditis and pleuro-pericarditis. The pericardium was adherent to the lower third of the heart, but the adhesions were recent and easily severed. The heart was not much enlarged, its valves were nearly normal, and its muscle firm. No rupture was found. He believed that the case was one of pleurisy and pericarditis with effusion, death taking place suddenly from mechanical interference with the heart and lungs. He thought that the most plausible explanation of the doctor's mistake in calling it a case of cardiac rupture was, that when severing the blood-vessels around the heart, blood flowed into the pericardium and mingled with the serous effusion. He did not think that a firm, non-fatty heart could rupture itself by its own contractions. If the pericardium was filled with effusion, in that instance it taught a lesson of far more practical value than a case of cardiac rupture under similar circumstances would. It was evident if the pericardium should be attached to the apex of the heart in a case of pericardial effusion, in which operative interference was determined upon to free the heart's action, a thrust of the trocar into the pericardium would greatly endanger the ventricular walls.

SEVERAL SPECIMENS OF EYES ENUCLEATED ON ACCOUNT OF SYMPATHETIC IRRITATION IN THE OTHER EYE, OR FOR FEAR OF ITS DEVELOPING.

Exhibited by DR. LITTLE.

Sympathetic irritation and sympathetic ophthalmia are the only two forms of the sympathetic diseases of the eye that afford an opportunity for pathological study, and in these cases only the enucleated eye can be investigated; just what are the conditions in the eye protected by the enucleation of the other eye primarily at fault must remain uninvestigated; if full restoration of the function of vision is attained in the one sought to be protected by the enucleation of the fellow eye, great satisfaction only is felt. Less and less opportunity is being afforded of studying the condition of an eye enucleated for the presence of sympathetic ophthalmia in the other eye, since merely sympathetic irritation of the sound eye impels the surgeon to enucleate the primarily affected eye before true sympathetic ophthalmia asserts itself. The portion of the eyeball which renders liable the development of this affection when diseased is so well known that not even sympathetic *irritation* should be allowed to develop, as an early enucleation will prevent it. Enucleation of the primarily diseased eye when true sympathetic ophthalmia is present in the other eye is now questionable, as, after all inflammation has subsided under treatment, surgical procedures upon the primarily affected eye may afford the best results for visual purposes. A recent experience will bear me out in this statement: the patient refusing the advice of a former medical attendant, and also my own, after two months suddenly developed sympathetic ophthalmia of the sound eye. Enucleation was then too late, now both eyes are becoming quiet, and I am in doubt which in the end will be the more available eye. A physician recently under treatment for a severely traumatized eye has refused the advice of two surgeons, and is now doing well, but the danger of a sympathetically irritated eye is constantly before him. The pathological investigation is then mainly restricted to eyes enucleated before or after sympathetic irritation has developed in the other eye, as results show that under such circumstances full protection to the remaining eye is afforded. Investigation of eyes enucleated when sympathetic ophthalmia of the other eye is present may explain the cause of the trouble in the remaining eye, but there is so much damage done to both that our knowledge only makes us the more desirous to prevent these conditions from arising, and in the multiplicity of conditions the principal cause is lost.

When enucleation is done to forestall sympathetic irritation or ophthalmia, or when the operation is performed with sympathetic irritation just beginning or present, the eye-ball removed is in a much better state to examine and more light can be thrown on the cause of sympathetic irritation since severe inflammatory processes cloud the change from sympathetic irritation to that of sympathetic ophthalmia, and the pathological study is more difficult. My collection contains only one specimen enucleated when sympathetic ophthalmia was present, and in this case there was a double acute glaucoma with sympathetic iritis. At this time I only desire to place before you some specimens of eyes enucleated for the protection of the fellow eye from sympathetic irritation, or in which it was already beginning or developed, and where in these cases good and permanent results have been attained. Four of these cases were due to traumatism, the fifth was of an inflammatory character. All but one of the traumatic cases had the fellow eye affected, and the examination of the enucleated eye in the exceptional case justified the operation. In two cases the sound became affected shortly after the injury to the enucleated eye. In one case no irritation until forty years had elapsed since the accident to the enucleated eye. In one non-traumatic case there were repeated attacks for a series of years of irritability in the sound eye, until the pain in the diseased eye, and the disturbance of the sound eye, compelled operation. In the remaining traumatic case for twenty years the uninjured eye was unaffected, except rendering the myopia more progressive, which rendered an operation imperative for its arrest and to prevent the outbreak of sympathetic ophthalmia later in life.

The patients were aged respectively three years, forty years, forty-seven years, fifty years, and seventy years. Three of the patients were males and two females. In four cases the left eye was enucleated, in one case the right. In every case the injury or disease involved directly or indirectly the ciliary body, and where the crystalline lens remained *in situ*, or the sclerosed tissue impinged most markedly on the ciliary region, the irritation most rapidly in the other eye. Where the crystalline lens was dislocated with weakening of the sclerotic tissue no irritation appeared for forty years in the other eye. In one case with dislocation of the lens and detachment of the retina and choroid, no irritation had appeared at the end of twenty years in the other eye. In those cases where the iris became entangled in the cicatrix sympathetic irritation of the other eye developed most rapidly, in one instance the lens becoming cataractous in the sound eye, while that of the injured one was either absorbed or lost at the time of accident. In short, is it not to injury of the ciliary nerves with their varied function, and to the damage done to the tissue in which they are imbedded in the different divisions of iris, ciliary body, and choroid, that we are to look as the cause of sympathetic irritation in the fellow eye, and of these the ciliary body

and nervous structures in it, with or without involvement of the iris, as the principal part involved? When sympathetic ophthalmia arises in the sound eye, cannot it be traced to inflammatory processes added to the irritation of the ciliary nerves and involving the iris, ciliary body, and choroid. How far the retina and optic nerve participate in sympathetic irritation it is difficult to say, only we find that in enucleation for sympathetic irritation the fellow eye regains the full function of sight. In sympathetic ophthalmia, however, the involvement of the nerves and retina is a more important factor, and the fellow eye is not so likely to be restored to full function of sight, as the condition in the enucleated eye and the one affected are more serious on account of marked inflammatory processes.

Dr. Little then gave in detail the histories of his cases, but all essentials having been already given, their publication will be delayed until the next volume of the Proceedings of the Society appears.

(To be continued.)

PROCEEDINGS OF THE RHODE ISLAND MEDICAL SOCIETY.

THE usual quarterly meeting of the Rhode Island Medical Society was held in Providence, December 21, 1882, the president, DR. JOB KENYON, in the chair. Sixty-eight Fellows attended.

DR. M. FIFIELD reported a case of

FIBROID TUMOR OF THE UTERUS.

The patient is married, age thirty-nine, first menstruated at thirteen, profusely, and at intervals of two weeks until six years ago. She has had two children and no miscarriages. For six years she has had severe uterine hæmorrhage at intervals of two to five months. She is anæmic. Health failing. The uterine tumor has grown steadily, and now extends above the umbilicus. What is the best treatment for such a case? Would Battey's operation afford relief?

DR. WEAVER reported that the patient on whom Dr. Tyng performed Battey's operation in Providence, January 8, 1880, for the relief of exhausting menorrhagia and uterine fibroid had entirely recovered her health. The fibroid gradually diminished in size, and cannot now be recognized.

The PRESIDENT reported a case of uterine fibroid tumor discovered ten years ago. Since the menopause the tumor has dwindled away, and now causes no trouble. If the patient is losing strength it is doubtless justifiable surgery to hasten the menopause by removing the ovaries.

DR. J. HOWARD MORGAN reported a case of

ANEURISM OF THE DESCENDING AORTA.

R. S., age thirty-eight, stone-cutter, native of Scotland, was seen April 19, 1882, in Westerly, having a few days before arrived from Vancouver Island. He was emaciated, lying on the left side, knees drawn up and back arched, countenance drawn and pinched, and occasionally distorted by sharp neuralgic pains. These pains, following the course of the right sciatic nerve, had tortured him almost constantly for over twelve months.

A prominence of the vertebral spines in the lower dorsal region had existed for some fifteen months, with no marked tenderness. Auscultation and percussion of the chest gave only negative results.

It was proposed to apply a plaster jacket in the hope of relieving his sufferings and enabling him to move about more freely, but owing to the patient's exhausted condition and the dread of causing pain this measure was, perhaps fortunately, never attempted. Death occurred suddenly on May 18th, and at the post-mortem examination an aneurismal sac was found on the right side of the spinal column, extending from one centimetre above the nipple to a point opposite the crest of the ilium. The sac was very thin at the upper portion, and had ruptured into the right pleural cavity. Pressure of the aneurism had caused absorption of the bodies of the dorsal vertebræ from the fifth to the twelfth inclusive. Opposite the sixth dorsal vertebra the sac communicated with the aorta by a small opening admitting only the tip of a finger. This small passageway and the pedunculated form of the sac probably accounted for the absence of auscultatory signs.

DR. F. B. FULLER reported a case of

CARCINOMA FOLLOWING ORCHITIS.

The patient, aged thirty-four, had chronic orchitis for twenty-two years caused by a blow on the testis when a lad of twelve years. Four months before removal the tumor became painful and rapidly increased in size, adding one third to its bulk in four months.

Testicle removed February 10, 1882. Excellent recovery from the operation, and immediate recurrence in the abdominal cavity, forming a tumor the size of a man's head, and causing death in two months.

Character of the Growth. Upper two thirds of the tumor is fibrous, and contains cysts and enchondromatous masses. Lower third is encephaloid. The abdominal tumor was encephaloid.

DR. W. H. PALMER read a paper on

THE OFFICE AND DUTY OF CORONERS.

Regarding the present Rhode Island law concerning the coroner and coroner's jury, the essay claimed "this system at its best is prompt, economical, and impartial. Beyond any other mode of preliminary examination it secures deliberation in suspicion and information in accusation. The condition is that we shall have it at its best. Such defects as are charged against it are not inherent in the system but in the incapable administration of the system." The office of coroner should always be filled by a medical man. Dr. Palmer is not in sympathy with a growing public sentiment which desires the abolition of the cumbrous coroner's office and the substitution of a system in which medical men shall simply determine the cause of death, leaving an inquest, if necessary, to be held by another official.

DR. ARIEL BALLOU called attention to the great importance, under the present system, of having only medical men for coroners.

DR. CASWELL was surprised that any but physicians had been appointed coroners in Providence. He defended the system of medical examiners as established in Massachusetts, and claimed that the system works admirably.

DR. O'LEARY inquired whether a coroner under the present system is expected to determine only the proximal cause of death, or to investigate remote and contributive causes.

DR. PALMER, in reply, quoted the recent Calender disaster in Providence as a case in which the coroner's investigation includes a rigid examination of the surroundings, such as the industries carried on in the building, the chemicals and materials used, the width and construction of stairways, exits, and fire-escapes, the condition of streets leading to the building, etc.

DR. R. F. NOYES read a paper on

PERITYPHLITIS.

The operation for perityphlitic abscess is of American origin, and Dr. Willard Parker was the operator. Dr. Hancock, of London, who operated in 1848 and reported his case the same year,[1] is often awarded priority by surgical writers, but Dr. Parker's operation was done in 1843, although not reported until 1867.[2]

In 1872 Dr. Bull analyzed sixty-seven cases of perityphlitic abscess treated without operation. Of these there were thirty-three deaths, a mortality of nearly fifty per cent.

Dr. Noyes had collected one hundred reported cases treated by operation. Of this number there were fifteen deaths, eighty-four complete recoveries, and one recovery with fæcal fistula.

Of these one hundred cases a foreign body or fæcal masses were lodged in the abscess cavity in thirty-one instances. The advantages of the knife over the aspirator in treating this class of cases are obvious, though the aspirator is valuable in diagnosis.

DR. ARIEL BALLOU reported a case of perityphlitic abscess which discharged into the colon. The appendix vermiformis sloughed off, and was voided per anum. The patient eventually recovered.

DR. D. O. KING reported a case of perityphlitic abscess in a child aged four and a half years, which Dr. Noyes saw in consultation. An incision was made through the abdominal walls, about two inches in length, just above and parallel to Poupart's ligament, and a warm carbolized dressing applied. The child made a good recovery.

DR. W. SHAW BOWEN reported in detail a case of

SECONDARY LARYNGEAL LUPOID ULCERATION.

Mr. H., aged thirty-nine, of regular habits, fell down a flight of stairs six years ago, causing fracture of the nasal bones and a displacement of the vomer. He recovered with but little deformity. In a few months a hard pimple appeared on the lip near the left ala nasi, which finally broke down and formed a ragged-edged ulcer. The ulceration extended upwards, involved the mucous membrane of the nasal cavity, and progressed until the vomer and portions of the turbinated bones were destroyed, and the superior and middle pharyngeal regions had undergone extensive morbid changes. Recovery seems to have been spontaneous, as nothing in the way of scientific medical treatment was undertaken.

The voice was somewhat muffled, but the patient was able to sing in a low register without great fatigue.

In December, 1881, he noticed a slight soreness of the throat, with increased vocal huskiness. The sore throat became constant, deglutition difficult, and in three months after the first signs of dysphagia he was unable to swallow solid food. A troublesome cough and loss of weight led the attending physician to pronounce the case one of laryngeal phthisis. It was then that Dr. Bowen saw the case. The uvula and free edges of the faucial pillars were then destroyed; the superior pharynx closed by union of the palatal arches with the posterior pharyngeal walls, and communication with the post-nasal space was by a small circular orifice. The epiglottis was partially destroyed, and the laryngeal mucous membrane so swollen and thickened that it was difficult to obtain but a faint glimpse of the cords.

Antisyphilitic treatment was tried for three weeks, as the diagnosis between laryngeal lupus and syphilitic lesions is always difficult.

Morphine mixed with finely powdered starch was insufflated over the surface of the epiglottis and on the laryngeal ulcers daily, and the patient instructed to apply olive oil containing a small amount of iodine to the base of the tongue and the surface of the epiglottis just before attempting to swallow food.

The diagnosis of scrofulide lupus was reached after abandoning the antisyphilitic treatment.

A four hundred and eighty grain solution of silver nitrate was carefully brushed over the ulcerated surfaces. Nearly twenty such applications were made before a slight change was apparent. A more rapid improvement followed the use of a mixture of iodoform in olive oil.

DR. E. T. CASWELL reported two recent cases of

LITHOLAPAXY.

The first case was that of a man, aged sixty-two, from whom ninety-two grains were removed. Second case, a man aged forty-seven; weight of calculi thirty-one grains, ten grains being the weight of a round button-shaped calculus that lodged in the tube, and was thus extracted.

Dr. Caswell exhibited and explained the latest modification of Dr. Bigelow's evacuating apparatus.

DR. W. E. ANTHONY read an appreciative obituary notice of the late Dr. George Capron.

DELEGATES TO STATE MEDICAL SOCIETIES.

The President appointed delegates to State medical societies for 1883 as follows: —

Maine: Drs. W. S. Bowen and W. E. Anthony.
New Hampshire: Drs. A. Ballou and W. R. White.
Vermont: Drs. O. C. Wiggin and A. O. Robbins.
Massachusetts: Drs. H. G. Miller and G. T. Swarts.
Connecticut: Drs. A. G. Browning and C. O'Leary.
New York: Drs. J. W. C. Ely and W. O. Brown.
New Jersey: Drs. O. Bullock and N. O'D. Parks.

— The fifteenth edition of the United States Dispensatory will be ready in January, 1883. The editors are Dr. H. C. Wood, Professor of Materia Medica and Therapeutics in the University of Pennsylvania, Joseph P. Remington, Professor of Pharmacy, and Samuel P. Sadtler, Professor of Chemistry, in the College of Pharmacy of Philadelphia. The revision has occupied about three years, and is said to be in all respects most thorough and complete. The encyclopædic character of the Dispensatory is developed to the greatest extent. The new Pharmacopœia will be in all its parts fully expounded and discussed, and the most recent non-officinal medicines, as well as those long out of date, will be carefully considered in the second part of the work.

[1] London Medical Gazette, 1848, page 547.
[2] Medical Record, March 1, 1867.

Medical and Surgical Journal.

THURSDAY, JANUARY 4, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

1883.

THE JOURNAL wishes its readers and contributors a happy new year.

Hope springs eternal in the human breast, and nothing marks that eternal cheerfulness more decidedly than the time-honored custom of wishing all good things to friends and acquaintances at each recurrence of a new year.

To wish a doctor a prosperous year will, it is to be hoped, not be construed by any one as wishing corresponding ill to the rest of mankind; on the contrary, we trust that each and every one of our medical readers may be the minister of good and the avertor of evil to his circle of patients, and find his pleasure and his profit in so doing, and that each recurring week may find him in condition to enjoy and profit by the good things that his JOURNAL brings.

LEPROSY. A CASE IN SALEM, MASSACHUSETTS.

THE neighboring city of Salem, the old rival of Boston in commerce with distant lands, has reasserted her claim to her old preëminence by becoming possessed of a case of advanced leprosy, of the genuineness of which there seems to be no question. The subject, a former citizen of the town, contracted the disease in the Sandwich Islands, from whence he escaped to San Francisco, to avoid being transferred to Molokai, the leper colony of those islands, and poverty and the malady finally drove him back to his old home, where the city authorities have been somewhat exercised as to the ultimate disposition to be made of this unusual importation. We believe this may be considered the only known example of true leprosy at present in this part of the country, though not long since a case was under Dr. J. C. White's treatment at the Massachusetts Hospital, another was formerly known in Boston, and a third case was discovered about a year ago in Providence. These three cases had all escaped from the lazaretto at Tracadie in New Brunswick.

The bacillus of leprosy was discovered in 1874 by Armauer Hansen, physician in charge of the hospital for lepers at Bergen, Norway. In communicating to the Christiania Medical Society in that year the results of his inquiries into the ætiology of leprosy, he announced that he had frequently observed small rod-shaped bodies in the leprous tubercles, and that these could always be found by careful search, though it has since been shown that their detection is by no means always equally easy at all stages of the disease, the bacilli being found more especially in fully developed tubercles rather than in those which have entered on the atrophic stage. Dr. Hansen's discovery has been confirmed by numerous investigators, among whom we may mention Cornil and Suchard in France, Hewsen and Köbner in Berlin, Majocchi and Pellizzari, in Italy, and Neisser, Eklund, Hillairet, and Gaucher and Berman in this country. The bacilli have been found in the blood, but their mode of entrance into that fluid is unexplained; they are found in the discharges from leprous sores but not in the skin.

With our present knowledge it is easy to consider leprosy as contagious in the sense of being inoculable, and to understand why, being contagious probably in that sense only, it does not spread more generally and rapidly. When he has reached the inoculable stage the leper, as a rule, has become an object of aversion.

Late years have added some important contributions to the literature of leprosy, and the question of its contagiousness has been a good deal discussed, with a manifest recent tendency to return to the old Biblical belief that it is contagious, at least to a certain degree. This question the discovery and present knowledge of the bacillus of leprosy should go far towards setting at rest, especially if still more thoroughly confirmed. Of these recent contributions to our knowledge of the disease, the Report on Leprosy to the Royal College of Physicians, the Report of the State Board of the Sandwich Islands, containing the observations of Dr. N. B. Emerson, and the studies of Mr. Fletcher at Cape Breton, published by Dr. McPhedran,[1] are perhaps the most important.

Dr. J. C. White, in a paper on Contagion in Leprosy, read at the last meeting of the American Dermatological Association,[2] gives a carefully prepared and thorough statement of the facts and arguments bearing on the question of contagion. In regard to the ætiology of leprosy he says: —

"The origin of the disease is unknown, it is too remote for investigation.

"There has been no apparent change in its type since the earliest intelligible records, either in relation to chronological or geographical distribution.

"It has ravaged countries where it is now wholly absent, although it still survives about the outskirts of some of them.

"It is endemic at present over large parts of the earth's surface, and prevails under the most diverse conditions of climate, soil, altitude, temperature, ethnic stock, and customs.

"Such diversity is a satisfactory demonstration that these extraneous conditions may possibly affect the predisposition to or course of the disease in individual or nation, that their ætiological relations cannot be causative.

"It is most prevalent among peoples not on the highest planes of hygiene or morals.

"It occurs notably in families through several generations, it is claimed, although it fails in great proportion to affect the immediate descendants of lepers. It also affects great numbers of persons residing permanently or temporarily in leprous regions whose ancestry is free from the disease.

"It occurs occasionally in sporadic form, that is, in persons who have never visited infected regions.

"The period of incubation is without definitely known limits. It rarely appears in children below the age of five. The shortest time of development after residence in an infected region is

[1] Canadian Journal of Medical Sciences, September, 1881.
[2] American Journal of Medical Sciences, October, 1882.

one year. It has appeared as late as fourteen years after such residence or recognized contact with lepers.

"The question in ætiology which I propose to discuss has been satisfactorily settled apparently more than once, although in contradictory ways, and so conclusively in modern times in the general opinion of the medical profession that until within a year or two any attempt to reopen it would have appeared almost ridiculous. Some peculiar events in its history of late occurrence, however, would seem to make this not only a legitimate agitation at present, but imperative in the interests of science and national economy."

Dr. White discusses the disease especially as observed of late in the Hawaiian Islands, Cape Breton, New Brunswick, and various parts of the United States. He is a strong advocate of isolation, feeling that lepers belong to the dangerous classes of the community which require perpetual confinement, and the sooner this remedy is applied, the less seeming cruelty will attach to it. In regard to the United States he says: —

"We have at present an unknown number of lepers in the United States, — let us say fifty or a hundred; one centre in Louisiana, another in Minnesota, Wisconsin, and Nebraska, another in California and Oregon, affecting three entirely distinct nationalities, in different climates, and under quite diverse methods of living. It is evident that the disease may make more rapid advance in one part than in another. Any circumstance, for instance, which tends to soften or abrade nodules, as a hot climate possibly, would of course greatly increase the danger of infection, so that the necessity of interference by compulsory means might be more urgent in the former than in the latter. It is evident, however, that such measures should be undertaken by the national government, and that they should be made applicable to all parts of the country alike. We have a National Board of Health to which their execution might be intrusted. There can be little doubt of their necessity, or of their success in eventually exterminating the disease. When this necessity becomes more apparent this result will be immensely more difficult of accomplishment. These measures should be: the establishment of graded hospitals in possibly insular localities in various parts of the country, to which all access should be prevented excepting under restrictions determined by professional rules; the enactment of laws which should make residence compulsory and perpetual, and the concealment of the disease punishable by severe penalties. These rules should apply to so-called sporadic as well as to endemic and imported cases, but the latter might be given the option of returning to their native land. The immigration of lepers should be prohibited and arrested at ports of arrival by inspection so far as possible, as other contagious diseases now are by quarantine regulations. By the establishment of such national measures immigration from leprous countries would largely cease, lepers would no longer change their residence within the country to escape the action of local laws against their liberty, marriage with them would become abhorrent when the people had thus become aware of its dangers, and after a generation has passed the disease would be virtually eradicated."

SIR THOMAS WATSON, M. D., F. R. S.

A MAN like the late Sir Thomas Watson belongs to science, to the art which he practiced, and to the profession which he adorned; moreover, the language which he knew how to use so well is ours, hence it is at once our duty and our pleasure to do honor to his memory. His death, in his ninety-first year, was announced by telegraph, December 12th, and, since the paralytic attack which manifested itself October 22d last, had not been unexpected. Some account of this attack and of the subsequent illness were given in a letter from London, published in the JOURNAL November 30th. Further details of the closing scenes, and of Sir Thomas's long, active, and useful life, have but lately reached us.

If we recall that Sir Thomas Watson was born as long ago as 1792, and was in the active exercise of his profession until within ten or twelve years, we realize somewhat all that such a life has witnessed and represents in changes, in experience, in progress.

He was born at Kentisbeare, a small village in Devonshire, where his father was temporarily residing, and was descended from an old Northumbrian family. He received his early education at the Bury St. Edmund's Grammar School. He entered St. John's College, Cambridge, in 1812, taking his B. A. degree in 1815, and being classed as tenth wrangler. In 1816 he was elected a fellow of St. John's College, and commenced the study of medicine at St. Bartholomew's Hospital in 1819, when twenty-seven years old. He passed one session at Edinburgh, and received a practicing license from Cambridge in 1822; in 1823 he was made a proctor of the university, and graduated as Doctor of Medicine in 1825, about six years being thus spent upon preparatory medical studies, and the age of thirty-three years being reached before taking the final degree. In 1826 he was admitted a Fellow of the Royal College of Physicians of London, to which body he was Lecturer on Materia Medica in 1833, 1834, and 1835, becoming its President and an F. R. S. in 1862. In 1827 he was appointed physician to Middlesex Hospital, and the following year to King's College Hospital, where, until 1836, he held the office of Professor of Forensic Medicine, in this year being appointed Lecturer upon the Principles and Practice of Medicine. He then began the course of lectures which ultimately expanded into the two volumes of Principles and Practice of Physic, so well known to us all who use the English language.

These lectures, their author tells us, were put together with unavoidable haste during the medical session in which they were first delivered, and were repeated, with slight modifications, during four successive years; they were afterwards printed in the pages of the *Medical Gazette*, and were first published in book form in 1843. In the paucity of good text-books on the subject in English at that time these volumes met a want which was strongly felt. The simplicity, clearness, and charm of the style in which the author's great clinical experience and sound and extensive learning found utterance, made Watson's Practice at once immensely popular, and that not merely among professional readers. It passed rapidly through five editions in England, and several in this country. The publisher, we happen to know, was so astonished and unnerved at the demand for the work, that when he called to make the first payment on account of the edition, he presented the author with a cheque for two thirds of the profits instead of for one half, as had been originally agreed.

The conspicuous attention devoted to the chapter on Different Modes of Dying and the Causes of Sudden Death was inspired, it is thought, by the fact that the writer's wife died most suddenly a few days after her confinement, in his own presence, the cause of death being at that time unexplained, but subsequently recognized as due to pulmonary thrombosis.

Sir Thomas Watson resigned his chair at King's College in 1840. He was appointed Physician Extraordinary to the Queen in 1859, Physician in Ordinary in 1870, and in 1866 a Baronetcy was conferred upon him, the degrees of D. C. L. and LL. D. having been bestowed by the universities of Oxford and Cambridge respectively in 1862.

He was called, together with Sir William Jenner and Sir Henry Holland, to attend the Prince Consort in his last illness, and also in the fatal illnesses of the Duke of Cambridge and the Princess Mary.

He was a man of exemplary piety and strong religious beliefs, but broad and liberal in his dealings with mankind, with a well-stored and well-balanced mind, and was greatly beloved and trusted by all classes. He had a very high ideal of the usefulness and dignity of the profession to which he devoted himself, and whilst living up to it in his daily walk of life bore his frequent honors with modesty and simplicity. Notwithstanding his advanced age, his mind was quite clear up to the beginning of his final illness, which overtook him at the house of his son in Reigate. In death as in life he was fortunate in being surrounded by family and friends who loved and admired him.

THE ARMY MEDICAL MUSEUM AND LIBRARY OF THE SURGEON-GENERAL'S OFFICE AT WASHINGTON.

THE following address to the Rhode Island congressional delegation was very numerously signed at the last quarterly meeting of the State Medical Society: —

"We, the undersigned, physicians and surgeons of Providence and the State of Rhode Island, respectfully urge upon our senators and representatives the importance of providing a commodious fire-proof building for the Army Medical Museum and Library of the Surgeon-General's Office in Washington, with the least possible delay. This museum and library are the most valuable of their kind in the world, and the medical profession of this country take a deep interest in their preservation and progress. We would respectfully but strongly protest against any action which should separate the library from the museum or remove it from its present management. And we hope that the necessary authority will be promptly given for the completion of the Index Catalogue, a work of the greatest value to all medical men, and of which we, as American physicians, are justly proud."

This is a very proper subject for physicians to take an interest in, and in regard to which to bring their influence to bear upon representatives in Congress. There can be no two views as to the importance of placing such valuable and unequaled collections as those of the Army Medical Museum and of the Library of the Surgeon-General's Office at Washington in a suitable and commodious fire-proof building. There may possibly be differences of opinion, though we think not among medical men, as to the propriety of uniting the Library of the Surgeon-General's Office with the general Congressional Library, and placing the whole under one management.

Such a change is advocated in some quarters, and commends itself especially, we believe, to the librarian in charge of the Congressional Library. We certainly hope it will not be made, but that books and specimens may be housed as they should be without being separated, and when both have been made safe as well as more accessible, the Index Catalogue of the library may not remain perforce unfinished from lack of the needed appropriations. We are sorry to see that the House Committee on Appropriations has reduced the appropriation for these two objects from $10.000 to $5,000. The Chairman, Mr. Butterworth of Ohio, seems for some reason ill disposed. It is to be hoped that better judgment or less ill will may be encountered in the Senate.

SUPPLEMENTARY REPORT OF HEALTH DEPARTMENT OF MASSACHUSETTS BOARD OF HEALTH, LUNACY, AND CHARITY.

IN a short editorial, December 14th, on Changes in the Massachusetts Board of Health, Lunacy, and Charity, we called attention to the fact that "with some excellent papers now on hand ready for publication the annual Supplementary Reports of the Health Department have been quietly allowed to come to an end." No such Supplementary Report has been published since that for 1880, and we now beg to call the attention of the members of the Board and of our readers to the following extract from Chapter IV., Section 8 of the Revised Statutes of this State: —

"There shall be printed annually on or before the assembling of the General Court, or as soon thereafter as possible, the number of copies of documents and reports specified in the following list: —

"Report of State Board of Health, Lunacy, and Charity, two thousand copies.

"Supplementary Report of the Health Department of the same, four thousand, five hundred copies."

DIPLOMA-TIZATION.

OUR language is constantly enriched by new words, which owe their existence to the exigencies arising from new discoveries in the arts and sciences, and from the establishment of new industries. The new industry established in this State seems to call for a word to express it concisely, and we have ventured to put in capitals at the head of this article a word which we feel sure will meet the approval of careful linguists as well as those interested in the new production. It is in strict analogy with such words as civilization: the hyphen has been introduced simply as a means of showing its derivation, and will undoubtedly drop out as the word becomes familiar. It is, of course, intended to express the process by which a community gradually becomes converted to the state of being universally diploma'd.

The JOURNAL takes pride in keeping its readers informed as to progress in various branches closely connected with medicine, and to that end publishes at intervals reports on progress in the various departments. It has under advisement the addition of a Report on Progress in Diplomacy and Diplomatization, but there is some difficulty in finding a reporter. It was at first suggested that the Commissioner of Corporations or some one in his office should be in-

vited to furnish the report, but a moment's reflection was sufficient to show that no one connected with the business of incorporation would have either time or strength left for outside duties.

We have to record the fact that

"the First Medical College of the American Health Society, having its location in Boston, has taken a charter for the purposes of preventing disease and pain; promoting physical perfection; uniting the interests of patients and physicians; establishing a medical school, college, or university; and diffusing valuable knowledge of physical beings. C. W. Hodgdon is its president, and L. D. Hawkins treasurer, George Dutton secretary, Edwin V. Wright, Warren H. Sherman, Albion Knowlton, Josephine R. Stone, and Lucy A. Cooke, trustees."

In regard to the American University, a daily contemporary of December 28th is responsible for the following: —

THE AMERICAN UNIVERSITY.

Dr. Joseph Rodes Buchanan, author of System of Anthropology and other works, is to be the head of this pantological institution, to be located in Boston, one department of which, the medical, is to be opened in April next. The object of this movement is to realize the highest ethical principles in education, as well as to impart thorough instruction in technical knowledge. For example, that the medical art may be made philosophic and satisfactory to a rational mind will be demonstrated, it is anticipated, by this branch of the university. A charter for the American University, to be established in this city, was issued a few days since. The university will pay as much attention to moral as to intellectual culture, and will make industrial occupation a part of education. The endowment pledged to the university will insure the operations of the institution when a suitable corps of professors is obtained.

MEDICAL NOTES.

— Dr. Henry I. Bowditch, in a communication to *The Sanitarian*, recommends that the Surgeon-General of the United States Army be *ex officio* a member of the National Board of Health, and have a seat in the Cabinet. He also suggests that a Department of Public Health is as important, and will soon be so recognized, as any other Department of the National Administration, and that when the time comes for its establishment, the Surgeon-General should act as secretary of it.

— The New York Post-Graduate Medical School has thus far met with gratifying success. The second term opens on January 8, 1883, and continues until April 28th without intermission. It is hoped that with its enlarged accommodations, improved facilities for instruction, and increased corps of teachers, it will meet with still greater success.

NEW YORK.

— St. Mary's Hospital, a new Roman Catholic institution, on St. Mark's Avenue, Brooklyn, was formally opened for the reception of patients on the 17th of December. Addresses were made on the occasion by Mayor Low and Bishop Loughlin, and the latter, in the course of his remarks, said that no distinction of race, creed, or country was to be made in the hospital. The building is of brick, with facings of Nova Scotia sandstone, and is four stories high. Together with the grounds, which comprise altogether sixty-one city lots, it has cost about $250,000. This is only one half the size of the building as it will be when finally completed, but there are accommodations for four hundred patients at present. The medical staff is made up of some of the best known Brooklyn practitioners, with Dr. John Byrne at its head.

— The opening of the new Eastern District Dispensary and Hospital, on South Third Street, Brooklyn, East District, took place on the following day. Mr. Demas Strong, president of the board of trustees, presided, and addresses were delivered by the mayor and Judge Neilson. The hospital is intended for surgical cases, and will accommodate forty beds. The land and building cost $45,000, which has been raised entirely by private subscriptions.

— The necessity of establishing a hospital in New York for children suffering from contagious diseases was discussed by the Commissioners of the Sinking Fund at a meeting held December 15th, when President Chandler and Dr. Woolsey Johnson, of the Board of Health, Dr. Abram Jacobi and Mr. Elbridge T. Gerry, president of the Society for the Prevention of Cruelty to Children appeared, and made addresses in favor of its establishment at the foot of East Sixteenth Street. Dr. Chandler said that during 1881 there were 7338 cases of scarlet fever among children, of which 1964 proved fatal, while of 5272 cases of diphtheria reported, 2249 died. There were in all, during last year, 19,157 cases of contagious diseases among children reported, of which 6160 proved fatal. Mr. Gerry stated that recently his Society removed from the Infant Asylum on University Place over eighty children with scarlet fever, diphtheria, and whooping-cough. The Board of Health were not able to do anything, the reception hospital being the only place for the care of such cases, while the buildings on Blackwell's Island were over-crowded with cases of small-pox, typhus, and typhoid fever.

PHILADELPHIA.

— It is intended to establish this coming spring an institution for Post-Graduate Instruction in which lectures may be attended upon special subjects under the charge of certain leading men in the profession in Philadelphia. Application is now making for the charter to the legislature, and it will probably soon be obtained. The names of those connected with this project are withheld for the present, but we have learned of some, and they are such as to need no guarantee of the success of the experiment.

— A dinner to Prof. Austin Flint, of New York, will be given on the completion of his course of lectures before the County Medical Society. The date has not been determined on, but it will probably be January 15, 1883. It is expected to be a very grand affair, as may be inferred from the names of the committee having the affair in charge, composed of Drs. Alfred Stillé, Chairman, J. M. DaCosta, William Pepper, S. W. Gross, James Tyson, Horace Y. Evans, and J. Ewing Mears, Secretary.

— The death of Dr. George Fox, of this city, has been announced, occurring December 27th. He had for some years led a retired life, and had relinquished active practice, although he continued his membership of the College of Physicians and other scientific societies. He was graduated in 1828 from the University of Pennsylvania, and then entered Pennsylvania

Hospital as resident physician, in which position he served until 1830. In 1848 he was elected attending surgeon to the hospital, and in 1854 resigned after six years' faithful service. His achievements as a surgeon belong to a past generation, but his apparatus for fractured clavicle had a great reputation for many years as a substitute for Desault's dressing, and is still in use, in modified form, at the Pennsylvania Hospital.

ST. LOUIS.

— The Board of Health of St. Louis has just finished an examination of the St. Louis Eclectic Medical College, of which Dr. George H. Field is Dean. The investigation arose out of the refusal of the Board of Health to register its graduates and to grant the college the privileges of the city hospitals. It is claimed by the Health Officers that the college is not in good standing with the profession, having been expelled from the National Eclectic Medical Association and the State Association; that its graduates are not recognized by any board of health in the country; that the standing of its faculty, one of whom had been charged in the courts with abortion, is bad, and that the college sold diplomas without requiring attendance on lectures. These charges were not refuted, and the Board unanimously voted to sustain Health Commissioner Francis in his non-recognition of the school.

Correspondence.

LETTER FROM LONDON.

MR. EDITOR, — The funeral of Sir Thomas Watson at Reigate was conducted in strict accordance with the spirit of true humility which was one of the most marked features of his character. He had expressed, in terms so strong as to be almost a command, the desire that his funeral should be conducted without pomp or useless parade, and his surviving relatives lovingly respected the behest. Accordingly, the remains of the deceased baronet were placed in a plain coffin of polished oak, decorated only with the beautiful floral offerings of affectionate friends and an inscription recording his name, the year of his nativity, — 1792, — and the date of his death — December 11, 1882. At half-past two the coffin was brought forth from the house and placed on a bier, on which it was taken to the place of interment, followed by the immediate relatives, among whom were the eldest son of the deceased and the inheritor of the baronetcy — Sir Arthur Watson, Lady Watson, Miss Watson, Miss Mabel Watson, Miss Amy Watson, Captain Watson, Master Gordon Watson, and friends and some representatives of the profession which the deceased for more than half a century had served and adorned. The *cortège* passed slowly through the private grounds of Reigate Lodge, into the main road, along which it continued for a few hundred yards, until it reached the gates of the churchyard. Here the body was met by the clergy and a surpliced choir, who chanted the opening sentences of the ritual. The greater portion of the service was, as usual, read within the church itself, a building venerable with age, and interesting as the burial place of Admiral Lord Howard, of Effingham, of Armada fame. Two well-known hymns were sung by the choir and congregation, and afterwards there was a procession to the adjoining cemetery, where the remains were interred in an ordinary grave, the bare earth of which was hidden by evergreens and flowers. A few of the townspeople were present, but not a sufficient number to deprive the obsequies of the private character it was designed they should possess. Nature shrouded the little band of mourners in an almost impenetrable mist, which intensified the general sadness, and invested the most picturesque of country churchyards with an unwonted aspect of desolation.

A more representative than numerous attendance of medical men paid the last token of respect to the memory of this most beloved leader of the healing art. The season of the year, and the severity of the fog in London, prevented many of the senior members of the profession from attending the funeral, no public announcement of which was made before the issue of the *Times* on the morning of the funeral. The President of the College of Physicians, Sir William Jenner, M. D., Bart., was prevented from attending by a summons to her majesty; but the College was represented by several of its Senior Fellows, among whom Drs. John Ogle and Sieveking were noticed. There were present also Mr. Spencer Wells, the President of the College of Surgeons, Dr. Pitman, a member of the Council of King's College, some members of the staff of King's College Hospital, including Professors George Johnson and Joseph Lister; the last two named, who had attended the deceased in his recent illness, led the column of medical and surgical mourners. Conspicuous among these was the snowy head of that venerable and almost patriarchal representative of the Army Medical Service, Dr. Jackson. Illustrative of the characteristic thoughtfulness and unselfishness of the deceased, it was mentioned that in his last illness he kept his bed before he was compelled to do so, as he said that by so doing he would spare others the inconvenience that they might experience if he did not die in his bed.

LONDON, *December* 16, 1882.

Miscellany.

A RECEPTION TO DRS. HOLMES AND BIGELOW.

A RECEPTION was given last Thursday evening to the retiring Professors of the Harvard Medical School, Dr. Oliver Wendell Holmes and Dr. Henry J. Bigelow, by Dr. C. B. Porter at his house in Arlington Street in this city. A large number of invitations were sent out not only to members of the profession in Boston but to distinguished physicians in other cities. His Excellency the Governor, his Honor the Mayor, the President of Harvard University, and other dignitaries and prominent citizens were present to do honor to Drs. Bigelow and Holmes. It was altogether a notable gathering and a very enjoyable occasion.

DISINFECTION IN TYPHOID FEVER.

As an evidence of the importance which is attached to careful disinfection in typhoid fever, which was advocated in a recent meeting of the Clinical Section of the Suffolk District Medical Society, the following official copy of the recent action of the "Con-

seil d'Hygiene et de Salubrité du Département de la Seine" is worthy of notice. The ordinance has been published, and copies are sent to every householder in any infected quarter.

"When a patient is found to be suffering with typhoid fever it is important to observe the following hygienic cautions: —

"I. *Isolation.* The patient should be placed in an apartment by himself and isolated as completely as possible from the other members of the family. If the circumstances do not permit a satisfactory isolation, it is preferable that the patient be taken to a hospital. If the patient remains at home, only those persons who are intrusted with his immediate care should be permitted to enter the sick-room. Children and young persons should especially be excluded from entrance of or communication with the rooms pertaining to the patient. The nurses and others in attendance upon the patient are advised to bathe in phenylated water (10 grammes to one liter water).

"II. *Ventilation of the Sick-Room.* The sick-room should be frequently aired and ventilated. All draperies, hangings, and carpets should be removed. The bed should be placed in the centre of the chamber if possible.

"III. *Disinfection of the Dejections.* The dejections of the patient, before being carried from the chamber to the water closet or vault, should be disinfected according to their volume by means of a solution of chloride of zinc (50 grammes to one liter of water). The same solution should also be poured into the vault or water-closet whenever the dejections of fever patients are deposited there.

"IV. *Disinfection of the Clothes, Bedding, etc.* All clothing of the body, the bed linen, and every article used in the care of the patient, should at once be plunged in a solution of phenic acid (20 grammes to the litre water) as soon as they are removed from the chamber, and should then be immediately sent to the laundry.

"V. *Fumigation of the Chamber.* Upon the recovery of the patient, or upon his death, a pan of ignited charcoal, resting in a pan of sand, should be placed in the room, upon which coarsely broken sulphur should be laid (20 grammes to the cubic metre), and the room should be tightly closed for twenty-four hours. In the mean time the clothing and bed linen should be washed with the greatest care. The furniture, floor, fixtures, etc., of the room should be washed with phenylated water (20 grammes to the litre). The room should not be refurnished or occupied for seven days after the fumigation."

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 23, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Typhoid Fever.
New York	1,206,590	617	219	14.41	20.08	5.82	2.43	9.71
Philadelphia	846,984	413	148	16.15	9.92	9.92	1.28	4.84
Brooklyn	566,689	251	90	14.43	25.35	5.85	4.29	1.56
Chicago	503,304	200	82	24.50	12.50	9.00	2 00	5.00
Boston	362,535	170	50	18.82	16.47	11.76	—	4.12
St. Louis	350,522	168	66	30.00	15.00	17.40	5.40	1.20
Baltimore	332,190	226	86	38.50	5.75	11.06	.44	—
Cincinnati	255,708	121	41	24.78	17.35	3.30	13.21	2.48
New Orleans	216,140	120	25	22.36	6.88	.86	—	.86
District of Columbia	177,638	72	24	5.56	20.85	1.39	—	—
Pittsburg	156,381	63	22	25.12	17.27	3.14	1.57	12.56
Buffalo	155,137	46	18	30.38	15.19	6.15	12.30	4.54
Milwaukee	115,578	61	26	22.96	19.78	14.76	4.92	3.28
Providence	104,857	58	10	17.24	3.45	5.17	1.72	5.17
New Haven	62,882	25	10	24.00	—	4.00	4.00	—
Charleston	49,999	34	8	14.70	—	—	—	11.76
Nashville	43,461	17	6	23.52	11.76	—	11.76	—
Lowell	59,485	22	8	—	13.63	—	—	—
Worcester	58,295	16	9	18.75	31.15	6.25	—	6.25
Cambridge	52,740	23	5	—	8.68	—	—	—
Fall River	49,006	19	7	36.82	5.26	10.52	5.26	—
Lawrence	39,178	17	6	35.24	5.88	35.24	—	—
Lynn	38,284	10	1	10.00	—	—	—	—
Springfield	33,340	11	4	—	—	—	—	—
Salem	27,598	9	3	—	—	—	—	—
New Bedford	26,875	—	—	—	—	—	—	—
Somerville	24,985	14	5	42.84	7.14	14.28	—	—
Holyoke	21,851	13	3	53.83	15.38	15.38	—	23.07
Chelsea	21,785	13	2	7.69	23.07	—	—	—
Taunton	21,213	—	—	—	—	—	—	—
Gloucester	19,329	7	2	14.28	—	14.28	—	—
Haverhill	18,475	4	0	25.00	—	—	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	1	0	—	—	—	—	—
Newburyport	13,537	7	0	14.28	14.28	—	—	14.28
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	4	1	—	—	—	—	—
Eighteen Massachusetts towns	128,248	33	12	33.33	3.03	24.24	3.03	—

Deaths reported 2975: under five years of age 1029: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 599, consumption 421, lung diseases 419, diphtheria and croup 230, scarlet fever 81, typhoid fever 78, small-pox 77, diarrhœal diseases 39, malarial fevers 30, measles 15, whooping-cough 15, cerebro-spinal meningitis 14, puerperal fever 12, erysipelas eight. From *small-pox*, Baltimore 57, New Orleans 13, Chicago four, Philadelphia two, Pittsburg one. From *diarrhœal diseases*, New York 11, St. Louis and Cincinnati four each, Fall River and Somerville three each, Boston and Pittsburg two each, Brooklyn, Chicago, Baltimore, District of Columbia, Providence, New Haven, Charleston, Nashville, Lynn, and Holyoke one each. From *malarial fevers*, New Orleans 11, New York seven, Brooklyn five, Chicago, St. Louis, Baltimore, Cincinnati, District of Columbia, Nashville, and Holyoke one each. From *measles*, New York nine, Boston and New Haven two each, Pittsburg one. From *whooping-cough*, New York eight, Philadelphia three, Cincinnati two, Chicago and Pittsburg one each. From *cerebro-spinal meningitis*, Chicago four, St. Louis three, Baltimore and Nantucket two each, New Haven, Somerville, and Haverhill one each. From *puerperal fever*, Chicago three, New York and Providence two each, Boston, St. Louis, District of Columbia, Buffalo, and Fall River one each. From *erysipelas*, Chicago three, Buffalo two, New York, Brooklyn, and St. Louis one each.

Five cases of small-pox were reported in Cincinnati, Pittsburg two; diphtheria 51, scarlet fever 27, typhoid fever 19, in Boston; scarlet fever 14, and diphtheria six, in Milwaukee.

In 33 cities and towns of Massachusetts, with a population of 965,151 (population of the State 1,783,086), the total death-rate for the week was 20.75 against 20.78 and 20.63, for the previous two weeks.

For the week ending December 2d, in 170 German cities and towns, with an estimated population of 8,464,027, the death-rate was 23.1. Deaths reported 3767: under five years of age 1702, consumption 495, lung diseases 378, diphtheria and croup 208, diarrhœal diseases 144, scarlet fever 102, typhoid fever 54, measles and rötheln 61, whooping-cough 42, puerperal fever 17, small-pox (Bromberg and Koblenz one each) two. The death-rates ranged from 12.3 in Darmstadt to 33.1 in Duisburg; Königsberg 26.6; Breslau 26.1; Munich 26.7; Dresden 23.6; Berlin 23.6; Leipzig 22.7; Hamburg 22.4; Cologne 17.7; Frankfort a. M. 13.7; Strasburg 33.1.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending December 9th, the death-rate was 23.4. Deaths reported 3794: acute diseases of the respiratory organs (London) 447, measles 119, scarlet fever 110, whooping-cough 81, fever 81, diarrhœa 39, diphtheria 29, small-pox (Newcastle six, London five, Wolverhampton and Nottingham one each) 13. The death-rates ranged from 16.2 in Derby to 35.5 in Sunderland; Brighton 17.6; Bradford 20.6; Birmingham 21.6; London 22.4; Manchester 23.3; Sheffield 24.8; Liverpool 29; Leeds 31. In Edinburgh 22; Glasgow 30.8; Dublin 24.9.

For the week ending December 9th, in the Swiss towns, population 494,390, there were 36 deaths from consumption, acute diseases of the respiratory organs, 30, diphtheria and croup 12, diarrhœal diseases nine, typhoid fever five, whooping-cough three, measles one. The death-rates were, at Geneva 7.2; Zurich 24.3; Basle 16.3; Berne 27.6.

The meteorological record for the week ending December 23d in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
December, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 17	29.819	26	35	12	53	71	73	66	W	W	W	15	14	8	O	C	C	—	—
Mon., 18	30.175	27	36	21	73	70	61	68	NW	NW	NW	9	7	10	F	C	C	—	—
Tues., 19	30.395	26	37	19	73	71	73	72	NW	NE	NW	12	6	7	C	C	C	—	—
Wed., 20	30.447	28	34	19	73	68	72	71	NW	N	NW	8	8	8	C	C	F	—	—
Thurs., 21	30.338	32	38	24	78	69	77	75	NW	NE	NE	7	8	7	O	O	O	—	—
Fri., 22	30.100	35	38	27	78	83	100	87	NE	NE	E	8	9	10	O	O	R	—	—
Sat., 23	29.714	38	41	33	100	89	89	93	NE	NW	W	18	11	4	R	O	C	—	—
Means, the week.	30.141	30						76										11.00	1.24

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

DOUBLE OSTEOTOMY AND OSTEOCLASIS. A CORRECTION.

MR. EDITOR, — The illustrations for the article in your last issue, A Case of Double Osteotomy and Osteoclasis, have been misplaced, so that it appears that the limbs were more crooked after osteoclasis. This was, of course, not the case. For "Fig. 3, after osteotomy," read "Fig. 4, after osteotomy and osteoclasis (front view)," and for "Fig. 5, after osteotomy and osteoclasis (front view)," read "Fig. 3, after osteotomy."

Yours truly, E. H. BRADFORD.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 22, 1882, TO DECEMBER 29, 1882.

PERIN, GLOVER, lieutenant-colonel and surgeon. Granted leave of absence for one month from the 19th instant. S. O. 217, Department of Dakota, December 20, 1882.

BILL, JOSEPH H., major and surgeon, will report to the commanding officer, Fort Omaha, Neb., for duty. Paragraph 4, S. O. 134, Department of the Platte, December 21, 1882.

KILBOURNE, H. S., captain and assistant surgeon. Granted leave of absence for one month, with permission to apply through headquarters, Military Division of the Missouri, for an extension of two months. S. O. 218, Department of Dakota, December 21, 1882.

MADDOX, T. F. C., assistant surgeon. To report to the commanding officer, Fort Clark, Texas, for duty. S. O. 138, Department of Texas, December 16, 1882.

REED, WALTER, captain and assistant surgeon. Relieved from duty as attending surgeon headquarters Department of the Platte, and will report in person to the commanding officer, Fort Omaha, Neb., for duty. S. O., 134, Department of the Platte, December 21, 1882.

TURRILL, H. S., captain and assistant surgeon. Upon being relieved from duty at Fort Omaha, Neb., will proceed to Fort Fred. Steele, Wyoming, and report to the commanding officer of that post for duty thereat. Paragraph 5, S. O. 134, Department of the Platte, December 21, 1882.

SUFFOLK DISTRICT MEDICAL SOCIETY. THE SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE will meet at 19 Boylston Place, on Wednesday evening, January 10th, at 7.45 o'clock. Dr. E. F. Cummings will exhibit the Genital Organs of a Hermaphrodite, with casts and drawings, and a description of the clinical features during life. Dr. A. N. Blodgett will show a specimen of Carcinoma of the Ovary with Cystic Degeneration. ALBERT N. BLODGETT, *Secretary*.

Original Articles.

A SIMPLIFIED EVACUATOR FOR LITHOLAPAXY,

BY HENRY J. BIGELOW, M. D.,

Surgeon to the Massachusetts General Hospital; Emeritus Professor of Surgery in Harvard University.

The operation for the immediate removal of a calculus through a catheter, like many other surgical operations, can be accomplished more or less satisfactorily by any one of several instruments which much resemble each other. But it can be done better by employing a more perfect apparatus than those now generally in use. It has been said that "no new form of instrument is required by this operation," which is true so far as it implies that neither a lithotrite nor an evacuator is a new instrument. But it would be a mistake to infer that the operation could have been done with the instruments of the old lithotrity, and that they had needed no change to adapt them to what is now required of them, or that they cannot be still further modified to advantage. The new operation cannot be performed with the old instruments. It requires a larger evacuating catheter than that of Clover, through which the usual product of the lithotrite could not pass, except powder and sand, and that only in limited quantities, because the other detritus obstructed the entrance of the tube.[1] Though at first received with a good deal of distrust, the large catheter has been finally adopted by all the surgeons who have done the operation, and, in fact, cannot be dispensed with. It should be combined with a thoroughly efficient aspirator. But no particular form of aspirator has so far met with general approval. Though better than it was, surgeons have none as yet which entirely satisfies all requirements of the operation, and is at the same time compact and convenient to handle and simple in construction. This part of the evacuator still needs improvement.

The usual parts of an evacuator, not including the catheter, are these: —

(1.) The exhaust, the best form of which is an elastic bulb.

(2.) A space or trap for air, at the upper part of the instrument.

(3.) A glass receiver at the lower part, to collect and show the débris.

In drawing out fragments from the bladder through the large catheter, one bulb or aspirator, if strong enough, is about as efficient as another. An aspirator of almost any shape, and having almost any combination of its parts, will do this. So will a mere elastic bulb attached directly to the catheter, without joints or receiver, if it is placed lower than the catheter, bent down like the body of a retort, so that the fragments can fall to the bottom of it; and the instrument will still work well if it has joints made, for economy, of cork or rubber instead of metal. But however otherwise arranged, a satisfactory aspirator should have —

(4.) Some device, near the catheter, to act as a trap for débris and secure every fragment that has passed it.

The chief difference among evacuators now is in the certainty with which they retain the fragments they have aspirated. Any instrument will draw out the fragments, but few hold them securely, for the débris do not always fall into the glass receiver nor do they always remain in it. On the contrary, they are easily carried back to the bladder. This defect in the action of the evacuator has received little attention from surgeons, although it is the only point connected with the instrument which offers any difficulty whatever. Until recently it has been remedied only by sacrificing simplicity in the apparatus.

In endeavoring to make a satisfactory evacuator for litholapaxy many experiments have to be tried. It is quite possible that a perfectly satisfactory instrument might have been contrived some time ago if it had been generally understood that an evacuator that works best with pieces of broken coal in a vessel of water will succeed best with the fragments in the bladder.[2] So also will the surgeon if he is otherwise well qualified. It is true that the living tissues are easily injured, but in other respects the experiment can be made sufficiently like the operation to give it great value. Aspirating débris from the bladder is not a question of pathology, but of operative surgery, of physics. And in view of the fact that we fail, in some bladders, to discover a last fragment even by repeated washing, an evacuator should be so constructed that it will absolutely prevent a fragment that has once passed the catheter from returning to the bladder to become the nucleus of another calculus.

It is not altogether easy to meet this requirement, because the solid particles are usually borne back and forth with the current of water. In a common evacuator they are carried wherever it goes, first from the bladder to the bulb, and then, when it is reversed, back to the bladder, a part only falling into the receiver at each aspiration. As we may fairly assume that a surgeon would not deliberately inject foreign bodies into a patient's bladder, there must be something wrong in a system which obliges him to do this, and makes it necessary to aspirate the same débris twenty times over in order to remove it. In short the apparatus, as commonly arranged, is still a defective one, and needs some special contrivance to assist the action of gravity in securing the débris.

Surgeons have long felt this. The use of a long elastic tube connected with the catheter has been more than once criticised, and with some reason, on the ground that it might contain fragments which would be returned to the bladder. And, again, in order to

[1] Sir Henry Thompson says (Diseases of the Urinary Organs, Philadelphia and London, 1882): "The evacuating catheter to be attached to the aspirator should be as large as the urethra will admit; usually No. 15 or 16 of the English scale [26 *to* 28½ *French*] may be used without any danger. Sometimes No. 17 or 18 [30 *and* 31 *French*] are admissible; but such sizes are quite unnecessary for small stones, and may produce mischief; hence they are only to be used where the presence of a large stone demands corresponding instruments." Or, it might be added, to expedite the operation, when the urethra is large and healthy. The size of the normal urethra, according to Otis, is, if we except the meatus, 32 of the French scale. Clover's evacuating catheter was 21. Those now in use range from 26 to 31. Care, however, and often special skill may be required to introduce safely the largest sizes; 31 is very rarely needed, and the French sizes 28 and 29 are generally the most convenient. For a final washing or sounding without anæsthesia, when it is desirable to give the patient the least discomfort, even so small a calibre as 26 is sometimes useful. Through a catheter of this calibre Mr. Teevan has removed calculi weighing six or eight hundred grains, but such cases should be regarded as showing what is possible rather than as establishing a rule of practice. Here I may add that although no lithotrite compares in size with the larger tubes, it is yet true that long-bladed lithotrites, especially if they have the sharp extremity of the old instruments, are more difficult than tubes to introduce with safety. Although since 1878 my lithotrites have been made in three sizes, I have rarely had occasion to employ any other than the middle size.

[2] The specific gravity of hard coal is 1.575. That of a urate calculus is 1.540, and of a mulberry calculus 1.262.

shorten by an inch the route from the bladder, a less convenient stop-cock has been substituted for the usual one. But lithotritists should be fully aware of the fact that whether there is an elastic tube or not a tenfold greater quantity of fragments is generally driven back out of the bulb itself, and that the difficulty lies almost wholly in that part of the instrument. At each expansion débris are drawn from the bladder into the bulb, where they are delayed until, when it is compressed, they are injected back into the bladder. Only a part of them, sometimes only the larger half, the quantity varying in different instruments, settle into the glass receiver. This important fact, so little recognized, should not be accepted without demonstration.

An instrument which Sir Henry Thompson has lately abandoned (Fig. 1) can be made to demonstrate exactly how the currents act upon the fragments in an evacuator which is unprovided with a catheter-trap to prevent them from reëntering the catheter. It is here selected because the peculiar form of this instrument makes it easy to fit a glass tube to it so that we can see what takes place in the interior. Let a piece of glass tube an inch in diameter be inserted at the joint JJ, between the bulb B and the catheter, to show what passes with the current from one to the other in either direction. If the end of the catheter be now placed in a suitable vessel of water containing fragments of coal of different sizes, while the bulb is alternately compressed and allowed to dilate, a continued stream of fragments will be seen rising from the vessel into the bulb, and then returning to the vessel, as they inevitably do to the bladder. The backflow of débris can be still better watched if a glass tube be also substituted for the catheter, as in the figure.

But there is another important fact illustrated by this instrument. Fragments do not always stay in a receiver after they have been deposited there. When the glass receiver R of this evacutor is half filled with fragments a part of these are easily carried back into the bladder or into the vessel. They are first lifted up from the receiver into the bulb, and then driven out through the catheter. For though the orifice of this glass receiver is small and protected by a special trap, the current and débris pass out of it as well as into it. It could not have been foreseen that fragments would escape from a receptacle apparently so well arranged. But it will be found that in any instrument, if the bulb or catheter directs the current into the glass receiver, whether directly or obliquely, fragments are easily carried out again.

And the general result is little better, if, to avoid stirring the fragments which lie in the receiver, the current is directed horizontally over the mouth of it instead of into it. Some of them then pass directly back and forth between the bladder and the bulb, over the receiver, without falling into it. This defect can be shown in an instrument recently employed by Sir Henry at the suggestion of Weiss & Co.,[1] where the stream from the catheter passes horizontally through an empty chamber on its way to the bulb. As the stream enters it its velocity is so diminished that fragments fall to the bottom into the receiver, in greater number when the bulb is weak. Many fragments are, as usual, secured. But in order to be wholly effectual the chamber intended to retard and break up the current by its size would have to be inconveniently large to give time to the floating débris entering on one side to settle into the receiver without passing further. The principle here involved is quite different from that of

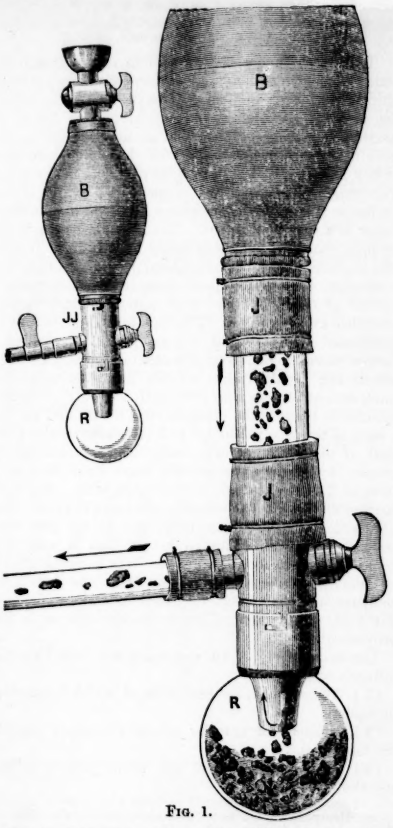


FIG. 1.

B, Bulb. R, Receiver. J J, a Joint.

These two figures, representing the same instrument, are intended to illustrate the fact that all evacuators return fragments to the bladder unless provided with some especial arrangement to retain them. The joint JJ of the smaller figure is opened in the larger figure to receive a glass tube. Through this fragments are seen as they are drawn into the bulb and expelled from it. The glass evacuating catheter shows them again, on their way to and from the bladder.

The receiver R shows other fragments in the act of being lifted by the current and returned to the bladder.

the evacuator represented in the above figure. Weiss's instrument is not unlike one formerly figured in the *Lancet*,[2] but the valve and strainer which there act as a trap have been omitted, and, in consequence, not a few fragments escape back to the bladder.

In Weiss's evacuator again, some of the fragments which enter the bulb gather in the bottom of it, which is lower than its outlet, and where there is no receiver to collect them. The chief difficulty, however, is not

[1] Lancet, January 7, 1882.

[2] Lancet, September 24, 1881, figure 5.

that these fragments stray into the bulb, but that for want of a trap they are afterwards liable to escape out of it to the bladder.

This difficulty is not wholly obviated by placing a strainer across the mouth of the bulb to prevent the fragments from entering it, as has been done in some other evacuators. Let me mention in this connection the results of a former experiment. It might be supposed that if the passing fragments were arrested by a flat strainer placed across the current, whether at the orifice of the bulb or elsewhere, they would fall into a glass receiver placed directly below them. But this is not the case. Though a large part fall into it, others collect upon the strainer, and unless the operator pauses after each aspiration till they have settled quietly into the receiver they are liable to be carried back by the current, if it is as strong as it should be. This has happened, in my own experience, whether the strainer was horizontal, vertical, or oblique. The fragments do not glance from it down into the receiver, but some of them cling to it until the current is reversed, and then go back. To make a strainer act as a trap the fragments should pass freely beyond it, and be intercepted only on their return. They will then be strained away from the bladder and not towards it. It is very desirable that the current should be unobstructed while the bulb is expanding, whether by a strainer or by curves and angles in the tubes. A simple flat strainer, placed anywhere across the whole current, retards it, especially if the urine is flocculent.

I find that the simplest expedient for collecting the fragments so that they will settle undisturbed in a glass receiver is to admit them into the bulb, and prevent their escape from it. After many experiments I have found nothing more effectual for this purpose than a straight cylinder with perforated walls, which is practically a prolongation of the catheter into the bulb. The water after bringing the fragments from the bladder is strained as it returns. To the open end of this perforated cylinder a valve might be attached, either a ball-valve moving loosely,[1] which is less liable to obstruction than a valve with a hinge, or, still better, at the same point, half an inch of cotton tube, which opens, allowing the fragments to pass up through it, and collapses with the reversed current, cutting off their retreat, the water, as it returns, passing back through the perforated walls. In operating with this arrangement I have found it to work perfectly, but a valve is not necessary, and the apparatus is more simple without it.[2]

The evacuator described below is more simple in construction, and aspirates more perfectly than any I have used. It is shown in Fig. 2, and is a compact modification of one formerly published in the *Lancet*[3] as "a simplified evacuator," but without the stand of that instrument, which is not essential, and has been omitted because operators seem to prefer to do without it.

The catheter is made to enter a spherical bulb obliquely upwards, and is prolonged to the centre of the cavity by the tube just referred to, open at its end and

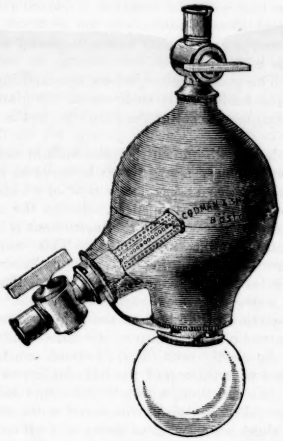


FIG. 2.

The writer's evacuator. It has an elastic bulb, glass receiver, and stop-cocks. Below there is a metal brace between the collar of the glass receiver and that of the catheter to steady the latter. Within the bulb, and open at the end, is a tube strainer to prevent the return of débris. The bulb forms a concentric handle to the catheter.

perforated on its sides with numerous holes, which act as a strainer. The catheter, tube, and elastic bulb are in a straight line. This arrangement has the great advantage of *not deflecting the current* and thereby diminishing its force. During aspiration the current bearing the débris is drawn straight from the bladder through the tube, into the widest part of the bulb, and the fragments, spreading there, fall towards the receiver. But when the bulb is compressed the water returns mostly through the perforations in the side of the tube because their area is collectively larger than the opening at the end of it, and because they are nearer the point at which the water passes out of the bulb. By means of this simple contrivance the water is strained, and *the return of fragments is practically prevented.* The tube strainer can be removed, cleaned, and replaced in a moment, and this is an advantage when there is much mucus, coagulum, or shreddy material in the urine, by which the holes of any strainer may be partly obstructed. Even then this tube continues to work well, but it is better to pass a brush over it if mucus adheres to it. It can be examined as often as the receiver is emptied. After the water has once been changed less mucus will be found.

The action of the perforated tube meets all requirements. In fact if the catheter is prolonged into the bulb by a tube which has no perforations in its sides, the instrument will perform very fairly. Such a tube might be fastened permanently in the bulb, but the apparatus can be kept cleaner if there is a joint through which it can be removed. The cavity of the bulb cannot be made too accessible.

[1] Ibid., September 24, 1881.

[2] A hinged or other valve strainer at the mouth of the catheter, if it opens to allow the water and the débris to pass through, works well enough as a substitute for the tube strainer. The catheter then opens directly into the bulb, and the route is the shortest possible one. But the tube strainer is much more simple, and the two inches which it adds to the length of the catheter are quite unimportant. In fact, the usual length of the catheter itself might be reduced two inches to shorten the route if desired. For strainers and strainer traps see Lancet, September 24, 1881. As there described, they are used in pairs, one protecting the entrance of the bulb, while the other, furnished with a valve, and placed at the head of the catheter, acts as a trap. The former, for reasons already given, is not always advantageous, but an effectual catheter trap to arrest returning fragments is necessary.

[3] Lancet, September 24, 1881, Figs. 8 and 11.

The above arrangement has several other advantages.

(1.) With the trap placed inside the bulb, the instrument is more compact, shorter, and more easily held, and as the spherical bulb is here placed in a straight line with the catheter, it forms a concentric handle, which enables the surgeon to direct the catheter better than when this handle is placed above it, at an angle with it.

(2.) The glass receiver is here attached immediately below the bulb, and is easily seen. A glass cylinder shows fragments better than a globe, but is less capacious.

(3.) It is well known that the bulb in action, especially when placed above the catheter, at an angle with it, communicates an oscillation to it of which some patients complain. By a special device the catheter is here made so steady while the instrument is in use that a separate stand is not wanted. This consists of a brace uniting the metal collar of the catheter with that of the glass receiver, and so steadying it that *the catheter no longer feels the movement of the bulb.* The conical projection of the bulb at the point where the catheter is attached contributes to the same result.

(4.) An elastic hose (Fig. 3) which can be quickly connected with the top of the bulb facilitates the operation. We can then, with a single compression of the bulb, get rid of any air or discolored water, and replace it with clean water without delay and without uncoupling the catheter. Besides, no matter how the bulb may have been filled at first,[1] it is better to be able to vary the quantity of water at any moment afterwards, and although without a hose we can add water through a tunnel, we cannot as easily withdraw it in the same way. We should be able to regulate the amount of water carefully, not only at the outset according to the capacity of the particular bladder, but also during the operation. For example, it is sometimes desirable to draw it quickly away to allow for the muscular strain of retching, or to relieve the expulsive efforts of the bladder itself which sometimes becomes very tense, and ejects water at the side of the catheter, even the large ones. More water is required at first, while fragments are numerous, to separate them and prevent their being wedged in entering the catheter. Later in the operation, less water makes it easier to find the last fragment, the minimum being reached when the wall of the bladder vibrates against the orifice of the catheter as the bulb expands, painfully if the patient is conscious. It is then important to add water again, just enough to prevent this obstruction and no more. In short there is no doubt that we can evacuate better by trying a little more or less water from time to time during the operation, and that this can be done more accurately and more readily by means of a hose than in any other way. With one end attached to the bulb the other can conveniently remain in a vessel placed between the patient's knees, or in any convenient position, or remain unattached till wanted.

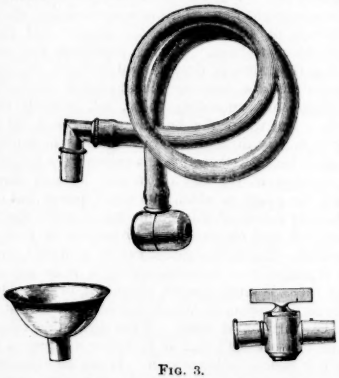


FIG. 3.

Apparatus belonging to the evacuator but not essential to it, namely, a tunnel and a hose, both of which fit on to the top of the bulb, and an extra stop-cock for the evacuating catheter.

The hose may be used or not. For those who prefer a tunnel (Fig. 3), one is furnished with the instrument; as also a second stop-cock (Fig. 3), which I find useful, if attached to the head of the catheter, in keeping the bedclothes dry when the bulb is to be removed.

This evacuator is made by Codman and Shurtleff, Boston.

[1] We can quickly fill the evacuator from a pitcher, if we invert the bulb and detach the receiver. The little remaining air can afterwards escape through the hose or tunnel.

ON SUDDEN DEATH BY THE ENTRANCE OF AIR INTO THE UTERINE VEINS.[2]

BY F. W. DRAPER, M. D.

IT is obvious on a moment's reflection that of the various channels by which air may enter the circulation, the pregnant or puerperal womb, by its situation, anatomical structure and relations, and functional changes incidental to gestation, is peculiarly exposed to this accident. Two conditions only are required in order to precipitate the mischief; the first is that there shall be air in the cavity of the uterus, and the second is that the uterine veins are open, either at the placental site or in other parts of the interior of the womb.

Let us note briefly what may be presumed to happen in the presence of such favoring conditions in the pregnant womb. What probably occurred, for example, in the second of the two cases reported in this paper? The woman submitted herself to a vaginal examination and to local instrumental manipulation at the hands of the attending physician, whose purposes both the parties understood. His finger in the vagina canalized that passage, whose walls in their normal state would be in apposition; free entrance of the external air would thus be facilitated, the position of the woman on the bed, by diminishing the intra-abdominal pressure, acting favorably to the same end. His sound or stiffened catheter, guided by his finger at the os uteri, was passed through the cervical canal, leaving its tell-tale marks in the sub-pubic tissues and on the mucous membrane of the posterior wall of the canal of the cervix. The design (if such had been formed) to puncture the fœtal membranes failed of accomplishment; the point of the instrument slipped backward toward the sacrum, and in its course tore away the deciduous membrane from the uterine wall. This membrane, so loosely adherent to the uterus when the

[2] Concluded from page 7.

fœtus is mature, and so readily cast off in the course of normal labor, was in no condition, at this stage of its development, to bear violent meddling. The womb, already in the eighth month of gestation, and preparing presently to put into exercise its powerful contractile forces in parturition, resented the premature interference with its contents, and, under the influence of the artificial stimulation, contracted; relaxing again, it established a partial vacuum in its cavity, into which, alongside the instrument, or, if it were a catheter, through it also, a quantity of air was drawn from the vagina. If this air now in the womb could have been wholly expelled through the same passage by which it entered, no harm would have followed; but this fortunate result did not occur. The air, when next the womb contracted, as it would speedily do under the added stimulus of atmospheric pressure within its cavity, would seek the readiest outlet; and this was not altogether into the vagina. The instrument in the hand of the operator was not pushed once forward and then withdrawn; it was worked or moved from side to side as far as the narrow utero-vaginal passages would permit, to make certain that the membranes were injured enough to insure a miscarriage; this action violently separated the decidua from the uterus over a V-shaped area, and tore open many of the uterine veins. These large canals, usually wide open in consequence of their relation to the muscular tissue which surrounds them, freely inosculating in all directions and unprovided with valves to prevent a reversed current of their contents, received into their easily accessible channels a part, at least, of the air which had been sucked into the womb. Meanwhile, another set of forces came into operation; the normal rhythmical action of the heart and lungs draws the venous blood to the right auricle from all parts of the body; its effect, so marvelously adapted to our needs in health, may become in some emergencies the source of gravest danger, as when it takes up and transports to the heart the bit of thrombus from an iliac vein inflamed after childbirth, to become in turn the potent breeder of fatal mischief when the right ventricle sends it onward into the pulmonary artery. So, in the present instance, by the same force, the contents of the uterine sinuses (air and blood) were drawn easily and quickly through the uterine plexus of veins into the great venous highway to the heart. Arriving there, the unnatural mixture would cause disturbances easily comprehended; apparatus designed to propel thick fluid cannot manage air, and just as the farm-yard pump behaves when its "box" needs repairs, so now the heart finds its valves unequal to the call upon them; the air goes partly to the lungs with each systole to make new trouble there, in part backward to the auricle whence it came to distend that cavity still farther; each diastolic relaxation draws more air from the womb, and thus, the favoring conditions continuing, the process goes forward till the heart, over-distended on its right side with spumous blood, refuses longer to act and succumbs in death. The lungs meanwhile have ceased to do duty; the blood conveyed in a broken current to the air-vesicles cannot be adequately renewed, and asphyxia plays its appropriate part in helping to destroy the patient. Some portion of the air, indeed, may succeed in accompanying the blood through the pulmonary circulation back to the left ventricle of the heart to be distributed through the arteries; but this is secondary in its relation to the main elements of the emergency, and means simply that the patient has survived sufficiently long for the round of the circulation to be accomplished.

Such, we may believe, is the mechanism of the attack which atmospheric air may make upon the citadel of life when it has access to the thorax by unusual channels. And that which may occur while the womb still carries its fœtal contents may happen with equal or greater facility immediately after delivery. "The mechanism," says McClintock,[1] "by which the introduction of air into the veins can be effected, admits of being explained in a few words. The veins of the gravid womb present four remarkable characteristics, namely, their extraordinarily large size, their freedom of inosculation, the total absence of valves, and their termination on the internal surface of the uterus, at the site of the placenta, by large open orifices. If the uterus be examined soon after delivery at the full term, the majority of these apertures will readily admit a goose-quill, and some will even allow the little finger to penetrate without laceration." And Simpson[2] thus graphically describes the way in which air enters the circulation in consequence of these favoring circumstances: —

"The interior surface of the organ [the womb], especially opposite the late seat of the placenta, has a number of ruptured venous orifices opening upon it. Supposing air once introduced into the uterine cavity, which in some cases may occur in consequence of the alternate relaxations and contractions of the walls of the organ, and supposing, further, that, under the returning contractions of the organ, the expulsion of this air was prevented by a clot at the os uteri, or other such obstructing causes, it will, then, under the compression to which it is subjected, be liable to be driven into the open venous orifices." And that which these eminent obstetric authorities long ago explained on theoretical grounds has been demonstrated clinically by a sufficient number of well-authenticated cases.[3]

The precise mode in which air destroys life in these instances is still largely a subject of speculation. That air admitted through the large veins to the heart usually kills has been conceded as a demonstrated fact for many years; but why and how it kills is a problem upon which the authorities in pathology, physiology, and obstetrics have not reached substantial agreement. Ever since Lagallois,[4] in 1829, first called attention to the obstetric relations of the subject, there has been no lack of theories to elucidate the proximate cause of death in these cases, and the great variety of these theories and the ingenuity of many of them attest the difficulty of the question. Some, of whom Bichat is the earliest representative, have maintained that air kills by its effect on the brain, causing cerebral anæmia. Others, like Nysten, Dupuytren, Amussat, and Magendie, have held that the mechanical effects of air in the right cavities of the heart, pro-

[1] Medical Press, March 10, 1852, page 147.
[2] Braithwaite's Retrospect, vol. xix., page 263.
[3] Those who care to pursue the subject farther in this connection will find the following writings of interest: Cormack: Clinical Studies, vol. ii., 1876. Greene: On the Presence of Air in the Veins as a Cause of Death. American Journal Medical Sciences, 1864, vol. xlvii., page 38: Esleben: Plötzlicher Tod in Folger von Lufteintritt in die Uterin-Venen, 1876. May: Cases of Sudden Death after Parturition, with Air in the Veins. British Medical Journal, 1857. Olshausen: Ueber Lufteintritt in die Uterus Venen. Monatschr. f. Geburtskr. u. Frauenkr. 1864. Kezmarszky: Ueber Lufteintritt in die Blutbatuen durch den Puerperalen Uterus. Arch. f. Gynækol., Bd. xiii., page 200.
[4] Annales Hebdom. de Médecine, vol. iii., page 183. Paris, 1829.

ducing over-distention and cardiac paralysis, brought about the fatal issue. Still others (Erichsen, Virchow, Oppolzer, Spiegelberg, Panum) maintain that asphyxia, or death at the lungs, is the true explanation, the air which passes into the veins at a distance from the heart entering the circulation of the lungs in fine bubbles and forming air-emboli in the lesser divisions of the pulmonary artery with as sure an asphyxiating effect as if a thrombus had obstructed the main trunk. Cormack urges the view that the first shock which the vital functions sustain is caused by a rapid distention of the right auricle, and its inability to contract on its elastic contents; if the distention be complete and rapid, instant death is the result; if death does not almost at once close the scene the phenomena of asphyxia will supervene. Bouillaud believed that death approaches from three directions: (1) by over-distension of the heart; (2) by the presence of spumous blood in the pulmonary artery preventing the free passage of blood through the lungs; and (3) by the irritative effects of the air on the brain, producing coma. It can hardly be profitable to multiply illustrations of this diversity of opinions. The drift of the later writings appears to be toward the German theory of air-embolism, although it is plain that this explanation is not without its difficulties.

What are the *symptoms* by which the mischievous presence of air in the circulation is declared? Although this is the most important part of the subject to practical physicians, it is difficult to set forth these indications with exactness; for the attack is itself a brief one, full of startling effects, and its phenomena follow in such rapid succession that, as Playfair observes concerning a similar grave emergency, "symptoms have not been recorded with the accuracy of ordinary clinical observation." Moreover, the majority of these cases do not fall under medical observation at all, and one must then take simply the imperfect account which frightened attendants and friends can give. But we may gather from the authentically recorded cases a tolerably clear notion of what transpires. If the air does not reach the heart in sufficient amount and rapidity to destroy the patient instantaneously by shock and "without a sigh, groan, or struggle," a series of symptoms like the following may occur: The woman changes color, turns ashy pale or livid, gives a low moan, and gasps for breath. If she speaks at all before she loses consciousness, it is in tones and words which express her horrible apprehension of impending danger, and the exclamation "I am dying!" often tells but too truly her mental distress. The pulse quickly becomes extremely small, rapid, and irregular. If the stethoscope be placed over the heart the sounds heard may clearly indicate the violent churning action to which the mixture of air and blood is subjected in the right auricle and ventricle. The respiration, at first hurried, and spasmodic, suggesting what a German writer expressively calls "air-hunger" (luft-hunger), immediately becomes slower, and ceases while yet the heart's action continues. Meanwhile the patient has fallen as in a faint; the features are fixed, the eyes staring or turned upward, and insensibility becomes complete. A convulsion generally occurs just before death. In some cases a scarlatinoid rash replaces the livid pallor of the skin, but this is a rare phenomenon, and does not occur in the rapidly fatal cases.

This is the brief clinical story. It is not contended that all instances are alike in their course and termination; the quantity of the air introduced and the rapidity of its introduction are the two controlling factors. On the one hand a small amount of air may enter a vein with only slight and temporary inconvenience to the patient; and, on the other hand, a large volume of air may rush to the heart with such rapidity that, in the language of Sir Charles Bell,[1] "neither violence, nor loss of blood, nor even the bursting of the aorta, nor nervous influence, produce effects so sudden and appalling, as by a lightning stroke." It is plain that, in obstetric practice, the risk is that if air can enter the uterine sinuses at all it will probably enter rapidly and in large volume, and thus produce the graver form of peril with its attendant symptoms. Under normal conditions nature kindly averts disaster of this sort by shutting the large open orifices of the uterine veins as soon as the fœtus and placenta have been expelled; a clot plugs the mouths of the vessels, and the contracting uterine muscle brings into close apposition walls of venous canals which the same muscle has hitherto held widely apart. If these preventive conditions are delayed and the womb lies in the abdomen like a flaccid bag, it is in just the state to invite the catastrophe of air embolism in its most serious form.

The question readily occurs, How can the attendant distinguish the symptoms of air in the circulation from other similar forms of emergency in the lying-in room? Of the various extreme and usually fatal casualties to which the puerperal patient is exposed, that which most resembles the one under discussion in its clinical features and result is the sudden obstruction to the pulmonary circulation either by the formation of a thrombus in the right side of the heart or by the plugging of the pulmonary artery, the so-called pulmonary embolism. Playfair says[2] that "there seems to be no essential difference between the symptomatology of spontaneous and embolic obstructions"; and again, that "the symptoms observed in fatal cases of air-embolism closely correspond to those of pulmonary obstruction." Practically the differential diagnosis is of less consequence than it would be if these startling attacks were less brief in duration and gave to the attendant more chance to study and compare the symptoms; and if, too, a successful course of treatment depended here, as much as it does under other circumstances, on accurate knowledge of the invasion. There are, however, some points which offer themselves upon a study of recorded cases whereby one of these emergencies can be distinguished clinically from the other. The time of the attack differs in the two cases; air enters the uterine sinuses, if it enters at all, while their orifices are still recently exposed, and thus the accident occurs ordinarily just after childbirth or while the abortionist is still at his work; pulmonary embolism, on the other hand, is oftenest observed several days after the womb has been emptied, and is a secondary complication of the puerperal condition, depending largely on wandering clots from distant veins inflamed and plugged some time after the delivery. Another difference relates to the attack in its progress; in pulmonary obstruction we are told[3] that "the intelligence during the struggle is unimpaired, and the dreadful consciousness of impending death adds not a little to the patient's suffering and to the terror of the scene;" in the other exigency, on the contrary, the patient almost immediately becomes

[1] Practical Essays, 1841, page 11.
[2] System of Midwifery, 1880, page 618.
[3] Playfair, op. cit., page 619.

unconscious at the onset of the accident and has hardly time to utter any exclamation before she seems to the by-standers to have fainted. A convulsion is the rule in the course of air-embolism; it is not reported often in connection with pulmonary obstruction. Finally, the stethoscope may assist in diagnosis; in the presence of a considerable quantity of air in the heart, provided the life of the patient continues long enough for the attendant to get his instrument adjusted, he may hear a peculiar and unmistakable sound which Cormack [1] describes as a "churning sound," indicative of the irregular and ineffectual efforts of the heart to rid itself of its unnatural contents.

But he must be a ready-witted and remarkably calm practitioner who can do more than guess at his diagnosis in the presence of either of these disastrous accidents, and the autopsy is probably, after all, the only trustworthy means of settling the question.

Can anything be done to avert the mishap of air in the veins, or to arrest and control its effects when once it has occurred? Upon the prophylactic side, it is obvious, in view of the ætiology, that all operative or simply exploratory acts liable to promote the admission of air to the uterine cavity, and all measures of treatment attended with similar risk either to the pregnant or the puerperal womb, should be avoided or carefully hedged about with precautionary recognition of the danger. It is no part of the purpose of this paper to give any warning counsel to abortionists to the end that they use greater care in their manœuvres; it is best, in the long run, for womankind, it is certainly best for legitimate obstetrics, that occasionally a woman should die suddenly in the abortionist's office, and that he be held responsible for her death before the courts. But it is fair to raise the question whether the methods most in vogue for the induction of justifiable abortion are sufficiently free from hazard. Barnes [2] condemns the douche, whether vaginal or intra-uterine, and speaks of the "warnings conveyed by many fatal catastrophes," among which he mentions the very accident which we have under consideration. Is the plan, so generally adopted, of introducing a bougie or catheter into the uterus, outside the ovum, and allowing it to remain there for hours, an entirely harmless procedure? Does not the older and equally sure method of the direct puncture of the membranes, if done properly, offer greater safety to the mother?

And that which applies to the gravid uterus applies equally to the womb just evacuated; air is not a safe tenant to take the place of the fœtus. Until the process of involution is fairly begun, and the chance of renewed relaxation of the uterus is passed, we have in the risk of air embolism, through sudden changes of posture, an added reason why the woman in childbed should remain quietly in a supine position. If intra-uterine disinfectant injections are used the greatest care should be taken that the valves and joints of the syringe are tight, and that all air is expelled from the nozzle before it is introduced. It is not improbable that some of the instances of temporary collapse which have been reported as occurring in the course of such injections may be traced to carelessness in their administration and to the projection of a small volume of air into the exposed veins at the placental site. The temporary use of the obstetric binder has a plain prophylactic justification.

[1] Clinical Studies, vol. ii., page 136.
[2] Obstetric Operations, page 307.

If the medical attendant happens to be present when his patient is overwhelmed by the casualty of air entering the uterine veins, he will best show his skill by directing his measures of relief to the heart, and by applying such remedies as will stimulate that organ to continued action so that it may perchance empty itself of its atmospheric contents, and get renewed supplies of its normal stimulant, the blood. The hypodermic injection of ether, or, if that is not at hand, of brandy or whiskey, and the injection of ammonia into a vein, would best serve this purpose. The application of the Faradic current would help in the same direction.

But in general, in these cases, the emergency has passed, and the patient has succumbed before the attendant can reach her bedside to show his skill and his coolness. It usually is his simple privilege to make a post-mortem visit, and to try then to discover the cause of the catastrophe. In pursuit of this search he will not forget the important, the supreme aid, indeed, which the autopsy can give him.

PROGRESS IN OBSTETRICS.

REPORTED BY WM. L. RICHARDSON, M. D.

TREATMENT OF ABORTION BY HOT WATER INJECTIONS.

Dr. Whitwell states [3] that the advantages of injecting hot water into the uterus and vagina in the treatment of abortion are: First. The existing hæmorrhage is stopped almost instantly, and there is but little liability of return while the douche is continued. Second. There is seldom any necessity for instrumental interference. Third. The patient, who may be in a state of partial collapse, is revived by the application of heat. Fourth. The keeping the vagina full of water allows the hand to operate with greater freedom. Fifth. There being no fear of hæmorrhage, the operator can work leisurely, and violence is unpardonable. Sixth. By carbolizing the water septicæmia is guarded against. Seventh. Nothing can be suggested which would be more likely to save the patient from pelvic inflammation with its attendant evils. Dr. Whitwell's practice is as follows: Supposing the miscarriage inevitable, should the os be closed and the hæmorrhage not severe, and, from the indications, it appeared safe to temporize, he would tampon the vagina as thoroughly as possible with either styptic cotton or simple carbolized wads of absorbent cotton. The chances are that when this was taken away the os would be found to be dilated, and the ovum ready to be discharged into the vagina. If the os were closed, the membranes having ruptured, and it were necessary to take active measures at once, he would advise the use of an anæsthetic, feeling sure that the dilatation would then be a matter of little difficulty. If, on the other hand, the os were open, and the ovum presenting, he would inject the hot water into the vagina, and thus stimulate the contractions of the uterus. If this were not sufficient, either the nozzle of the syringe or an attached catheter could be passed within the cervix, and the hot water be slowly injected. Under this stimulus the uterus would quickly force the ovum into the vagina with but little manual assistance, and all hæmorrhage would cease. Should there, unfortunately, be any retention of a portion of the ovum or membranes, he

[3] London Medical Record, June 15, 1882.

would wait and use the hot water again as soon as any oozing appeared.

TREATMENT OF PUERPERAL ECLAMPSIA.

Dr. Carl Breus reports [1] six cases of puerperal convulsions treated by diaphoresis, with only one fatal case. The patient is put into a hot bath (100.4° F.), and the temperature is then raised as high as the patient can bear it, care, of course, being taken to keep the face above the surface of the water. The patient is kept in the bath about half an hour, or until a profuse diaphoresis appears on the head and face. She is then wrapped up in a sheet, and around her are wound several warm, thick blankets, her face being left uncovered so as not to impede the respiration. If the patient complains of thirst she is allowed to drink moderately of soda-water. After remaining thus for three or four hours the blankets are to be removed, and the patient kept moderately covered. The bath may be repeated on the recurrence of convulsions or any increase in the tendency to coma. In addition to the bath Dr. Breus strongly recommends the administration of the hydrate of chloral given in enemata. In the first of the six cases reported convulsions appeared in the ninth lunar month. The attacks ceased ten days after the use of the baths, and did not return. The patient gave birth to a living child four weeks later. In the second case the convulsion occurred during the sixth month. Similar treatment caused a cessation of the attacks after eleven days, and six weeks later the patient was delivered of a living child. In the third case the convulsions occurred during labor, and continued after delivery. Baths were given, and the patient recovered. In the fourth case the convulsions occurred at the close of labor, and the patient made a good recovery. The fifth case ended fatally on the third day. This patient was, however, comatose when she entered the hospital, and, moreover, had cirrhosis of the liver. In the sixth case convulsions occurred on the twenty-third day after delivery. The patient recovered.

OIL OF EUCALYPTUS IN OBSTETRIC PRACTICE.

Dr. S. Sloan reports [2] the results of his experiments both in hospital and private practice with the oil of eucalyptus as an antiseptic. He had been led to use it owing to his objections to carbolic acid. The latter cannot, he thinks, be used continuously owing to its poisonous action, and the fact that it causes more or less irritation, which prevents a speedy healing of any lacerations. Moreover, he is persuaded that carbolic acid tends to the coagulation of the lochial discharge, thus predisposing to its retention within the uterine cavity. Following the suggestion of Mr. Lister, Dr. Sloan began to experiment with the oil of eucalyptus, and claims that it is not poisonous; that it is a non-irritant when used sufficiently strong to act as a disinfectant; that it does not tend to coagulate the lochia; that it acts as a stimulant to the uterus, causing and maintaining uterine contractions; that its odor is decidedly preferable to that of carbolic acid.

He advises its use in the form of a broad and short pessary applied as near as possible to the os uteri, and there kept in position. The pessaries are made according to the following formula: Oil of eucalyptus, six drachms; white wax, four drachms; cacao butter, four drachms. These ingredients are to be melted together and made into twelve pessaries. One of these should be introduced morning and night. Dr. Sloan does not claim that there is any actual absorption into the system of the oil, but he feels confident that it does freely pass within the uterine cavity. In all hospital cases he has used the pessaries, and in such cases in his private practice as seemed to call for any special antiseptic precautions. He cites, amongst other cases, one of pyæmia, in which the patient was nearly dying when he injected hypodermically five minims of the oil of eucalyptus and twenty minims of olive oil; this was repeated every hour and the patient recovered.

[1] Archiv für Gynäkologie, xix., 2, 1882.
[2] London Lancet, September 2, 1882.

SIGNIFICANCE OF PROLONGED GESTATION.

Dr. Louis A. Rodenstein reports [3] four very interesting cases in which the fœtus was carried in utero longer than the normal period of gestation. He then alludes to the large number of authentic cases, reported by accurate observers, which establish the fact beyond any question, that prolonged gestation is not a myth but a fact. He does not attempt to fix any limit to its prolongation, but insists that the fact that it may be prolonged two months can no longer be questioned. The same principle is involved whether the gestation be carried three days, or, as Professor Meigs has reported, one hundred and forty-five days. After the uterus has physiologically performed its function of gestation for nine months, the proper work of gestation ceases. Why expulsion of the fœtus does not then always ensue Dr. Rodenstein does not attempt to explain, but he believes that the child no longer goes on growing, but lies passive in utero. Were it otherwise, the children would grow to such a size as to render delivery in the usual way impossible; whereas, in the cases cited, the size of the child was normal at the expiration of the prolonged gestation.

A NEW SIGN OF PREGNANCY.

Jorisenne claims [4] to have discovered a new sign of pregnancy. Graves long ago called attention to the fact that in all cases of hypertrophy of the heart the radial beat remains constant, no matter what be the position of the body. Assuming that a hypertrophy of the heart exists in pregnancy Jorisenne has found that, while in health there is a variation of from ten to twenty beats in the radial pulse, according as the body is in an upright or horizontal position, in pregnancy no such change is observed. He advises that the pulse should be carefully counted when the patient is standing, then when sitting, and then when reclining. He has been able to make out the existence of pregnancy as early as the first month by this sign, when the only other symptom was amenorrhœa. His explanation of the reason for this uniformity of the pulse is to be given hereafter.

[3] New York Medical Journal, May, 1882.
[4] Archiv de Tocologie, June, 1882.

— A passenger in a sleeping car on an Ohio railroad was injured by the fall of the berth above him and received $6000 damages from the railroad company. The company appealed on the ground that the sleeping car company was the responsible party, but the Supreme Court overrules this point and holds that the railroad company must answer.

Reports of Societies.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.[1]

C. B. NANCREDE, RECORDER.

STAB OF PERICARDIUM, DIAPHRAGM, AND LIVER.

Exhibited by DR. STUTTMATTER.

The specimens were removed from a German laborer aged sixty-two, a patient in the surgical wards of St. Mary's Hospital, under Dr. Mears, who was admitted July 16, 1882. He had been laboring for some days under a mental delusion, and after writing a clear, intelligible letter to his wife and family in Germany stabbed himself with a clasp knife in the right side of the chest several times, notwithstanding all efforts of the bystanders. He was at once taken to the hospital, and on admission was much excited, with a rather flushed face, but little shock, struggling to escape from the punishment of his supposed crime. Examination showed two wounds, one over, and reaching down to the cartilage of the sixth rib of the right side, about one and a half inch from the sternal border, and about two inches in length, the other half an inch from the border of the sternum and severing from it the cartilages of the seventh and eighth ribs. Closer examination of this wound showed that these two openings through the costal cartilages about a line apart, the outer passing downward, outward, and backward, the inner in a direction inwards, downwards, and backwards. Through these openings air occasionally passed when the patient respired violently when struggling, causing a high-pitched sucking and blowing sound. None but slight bleeding took place, and that from the integument. Physical signs everywhere normal except over the lower part of the right lung, where increased resonance was noted, and on heavy percussion a kind of "cracked-pot sound" was elicited. Auscultation revealed diminished breathing sounds over the upper part of the right lung, while respiratory sounds were entirely absent over its lower portion. Heart's action rapid and irregular. Heart sounds feeble, specially the first. Pulse 112, respirations 42 and shallow. There were no signs of internal hæmorrhage. Both during inspiration and expiration when the head and shoulders were raised, and he inspired deeply, a peculiar, high-pitched blowing sound was occasionally heard a little to the left, and below the ensiform cartilage. It did not resemble the sounds produced by gas in the stomach or bowels. Antiseptic dressings were used, and morphia given, but he slept little, although nothing was complained of beyond a burning sensation beneath the sternum. The next morning he was calmer, rational, felt pain only during inspiration, and altogether breathed more easily than during the night, although the physical signs remained the same. The abdomen was tympanitic, the pulse full and moderately strong, 92 per minute; respirations 32, and expiration labored with groaning. Temperature 101.6° F. During the next night grew worse, with restlessness, poor sleep, followed in the morning by cutting pains in the chest at each inspiration, anxious, pinched face, and considerable anxiety as to his condition. Friction sounds were now heard over the whole of the left chest, and on the right side from the apex to the fourth rib. Pericardial friction sounds were also heard. Pulse 100, full and hard; respirations 48, with rapid, jerky inspiration, abruptly terminating, to be followed by a forced, prolonged, groaning expiration; temperature 103.2° F. Evening pulse 120; respirations 44; temperature 103.2° F. During the next twenty-four hours all the symptoms, physical as well as rational, of effusion into the pericardium and both pleuræ developed, but although the abdomen was tympanitic no signs of effusion were detected. Pulse in evening 120, irregular, intermitting; respirations 40; temperature 101.8° F. Had a bad night, and next morning seemed much prostrated, with a feeble, occasionally intermitting pulse of 120 per minute; temperature 102.8° F.; respirations 40, labored and shallow. Low, muttering delirium now set in; he sank rapidly, and died at two P. M. of the 20th, with a temperature of 105.5° F. [The surface temperature record not showing anything of very *decided* interest is omitted.]

Sectio Cadaveris. Brain: pia mater adherent, thickened in patches, and opaque, specially on either side of the vessels, which were filled with dark blood over the upper convex surface of the left hemisphere. There was a slight amount of serous effusion in the subarachnoid space. The ventricles contained a small amount of serum. Chest: on raising the sternum the right pleural cavity was seen filled with a thick, fatty-looking effusion, with some bands of recent lymph extending from the lung to the chest wall. The apex of the lung was quite firmly adherent to the chest wall. The anterior surface of the lung was covered to the depth of one fourth of an inch with soft, grayish-yellow lymph. A portion of the back part of the inferior lobe was consolidated. The left pleural cavity was only about half filled with the same thick layer of lymph and adhesion of the apex that was noted in the right lung. No part of the left lung would sink in water. The pericardial sac was distended with fluid, and both upon its inner surface and upon that of the heart was abundance of lymph connecting the two surfaces by drawn out bands of the same. There was a large chicken-fat clot in the left ventricle, extending about six inches into the aorta. The right ventricle was filled with blood, with a small clot extending into the pulmonary artery. Examination showed that while there were but two penetrating wounds externally, the knife must have been thrust in repeatedly after partial withdrawal, as there were three openings through the diaphragm, penetrating the liver to the right of its suspensory ligament, and one traversing the lower part of the pericardial sac and entering the left lobe of the liver for about one inch. The other liver wounds were one fourth, one half, and one sixth of an inch deep. There were no traces of peritonitis, although about two ounces of serum was present, probably escaped from the pericardial sac through the wound. The liver wounds did not gape, were ununited, and surrounded for about an inch in every direction by a brownish-yellow discoloration. The liver weighed sixty-two ounces. Spleen enlarged and soft; other organs healthy. [Owing to want of space the remarks of Stuttmatter have been omitted, to appear in the next volume of the Society's Transactions.]

Remarks by DR. MEARS. I was much interested in this case. During life the symptoms of wound of the diaphragm and of the liver were markedly absent, whilst those of injury of pericardium and pleura developed as the interval after the receipt of the wounds increased. The external wounds gave little indication as to the direction taken by the knife after puncturing

[1] Concluded from page 14.

the thoracic cavity, and, as shown by the post-mortem examination, no information as to the extent of injury inflicted. The absence of symptoms of injury of the diaphragm may be explained by the fact that the wounds were in the tendinous portion of that muscle, and being small did not interfere to any great extent with its function in respiration. In injuries causing laceration of the muscular fibres attached to the ribs dyspnœa occurs as a prominent symptom by reason of the impairment of the respiratory duty of the muscle. Moreover the symptoms may have been masked by those referred to the injury of the pericardium, as in wounds of both of these structures dyspnœa is a prominent symptom. The knife, in one of the thrusts, passed through both, and involved them in a common injury. The only explanation I can offer of the production of the blowing or rather suction sound which was heard under the ensiform cartilage is that it was occasioned by the passage of air during inspiration through the openings in the diaphragm, the air entering primarily the lung cavity through the external wound. The fact that the air did not pass in and out of the external wound during the act of respiration afforded good evidence that the lung was not wounded. The wounds of the liver were of such character as to make little or no impression beyond what might occur as the result of injury to the coverings and superficial portions. Puncture of the liver with a trocar is frequently performed with a view of evacuating fluids. Instances are reported in which no fluid has been found, and no harm has been inflicted by the tapping. Extensive lacerations, the result of gun-shot wounds or ruptures following falls, produce characteristic symptoms of shock and internal hæmorrhage.

SECONDARY SARCOMA OF HEART, LUNGS AND GALL-BLADDER, FOLLOWING PRIMARY AMPUTATION FOR DEPOSIT IN THE FEMUR.

Presented by DR. WILLARD.

The specimens exhibited were the heart, lungs, and gall-bladder of a female patient, aged twenty-one, whose right thigh had been amputated four months previously for a spindle-celled sarcoma of the lower end of the femur. The apex of the right ventricle was infiltrated with a sarcomatous mass which extended into a cavity among the columnæ carneæ, forming an irregular-shaped body occupying one fifth of the space. The walls were softened, and but little of a muscular fibre was to be seen at the apical region. The diseased tissue was very soft, and easily detachable, rendering its propulsion into the lungs a matter of exceeding probability at each heart beat. The walls above the mass were natural in appearance and in thickness, the valves showed no evidence of disease on either side of the heart. The left ventricular and both auricular walls were healthy. The disease had not reached the visceral layer of the pericardium, and there was no abnormal effusion in the cavity of the sac. The septum ventricularum was not involved. That numerous particles had been swept into the lungs was very evident when these organs were examined. At a large number of points in either lung were to be seen white masses varying in size from that of a pin's head to that of an English walnut. Some of these were dense, others were undergoing softening, and in nearly every instance the lung substance surrounding was so disintegrated that the mass seemed to be in a cavity containing a dram or more of sanguinolent fluid. A very moderate degree of pressure would cause a nodule near the surface to burst its pleural covering, and give rise to an accident similar to the one which was found to have occurred near the right apex. At this point a large sarcomatous mass had excited a degree of inflammation sufficient to fasten the lung to the parietal pleura, and one week before the patient's death ulcerating through the serous covering had given rise to an internal hæmorrhage that was well-nigh fatal, and gave the symptoms of sudden collapse noted in the history. This escaped blood was found in the right pleural cavity confined by adhesions chiefly to the upper portion of the chest. In the week which elapsed between the hæmorrhage and death it had coagulated, formed chicken-fat clots and other coagula weighing fully two pounds. The pleural cavity below the adhesions contained about two quarts of bloody serum. There was no consolidation of the lungs save around the diseased foci. The lungs had evidently acted as a complete strainer, and had prevented the passage of emboli, for liver, kidneys, spleen and all other organs were healthy, save one small spot in the gall-bladder. The brain was not examined. The primary disease in the femur had apparently resulted from traumatism, since no difficulty had existed previous to a severe fall upon the knee. From this time the pain on walking was continuous, and four months later there was decided enlargement of the external condyle and swelling in the popliteal space. The chief points of interest in the case were: First, The traumatism acting as an exciting cause. Second, That the physician who first saw her detected neither fracture, nor luxation, nor anything beyond contusion of the joint. Third, The appearance at the end of four months of a pulsating tumor in the popliteal space, which presented a decided bruit but no thrill. This was due to the lifting of the artery from its bed by the sarcomatous mass. Fourth, The non-involvement of the knee-joint, although the nodules had pushed forward the synovial membranes between the condyles posteriorly. The articular cartilage of the femur was intact, although the bone tissue immediately beneath it was extensively diseased. Fifth, The return of the disease, not in the stump but first in the right ventricle, leading to failure in circulation and great prostration, which came on from four to six weeks after the amputation and without anything in the condition of the stump to warrant such depression. The patient seemed in articulo mortis, yet there was no pain and no dyspnœa, only a feeble, rapid heart action accompanied by low delirium and weakness. There were no valve sounds audible. These symptoms were due, as shown post mortem, to the deposit and development of the sarcomatous mass in the heart. Nature, however, gradually accommodated herself to the new growth, and the patient rallied for a time, so as to be able to walk on crutches, eat heartily, and consider herself in good health. She got fatter, and only slight dyspnœa on exertion, with three or four coughs a day, remained to indicate recurrence of the disease. Sixth, A sudden, causeless as to exertion, profuse hæmorrhage, from the collapse incident to which she rallied and lived one week, with respirations 30–36, pulse 130–140. Seventh, The primary and consecutive growths showed a preponderance of spindle cells, while the secondary nodules were composed chiefly of round cells. Eighth, The post-mortem examination throws great light upon the clinical symptoms, while the great rarity of sarcoma of the heart makes it important to note that there was never any angina pectoris.

In Dr. Ingram's report of a case called carcinoma of the heart, in the Transactions of this Society for 1877, the only case ever presented to this Society, angina pectoris was indicated as one of the diagnostic points. In the report of the Committee on Morbid Growths Dr. Ingram's specimen was shown to be really an alveolar sarcoma. Secondary sarcomatous growths of the heart are mentioned by various authors, but the histories give no clinical signs of the growths.

DR. BARTON said that in regard to traumatisms causing morbid growths he considered that they probably had no more causative effect than acting as exciting causes.

DR. FORMAD asked if the exact nature of the primary growth was known, whether it consisted of round or spindle cells, since it has been stated that the spindle-celled variety never forms metastases.

DR. SEILER replied that the primary growth consisted of both round and spindle cells.

DR. SHAKESPEARE agreed with Dr. Barton as to the origin of the primary growth. He did not believe that injuries were anything more than exciting causes in those predisposed to such growths. The case presented a typical example of the method of metastasis; we have the growth first developing at the knee, whence particles are carried by the veins to the heart, become there lodged, and develop into a tumor, which forms a new centre from which microscopic emboli are carried by the blood-current into the lungs, where they lodge and grow into the nodules seen in the specimen. Metastasis of sarcoma occurs by means of the blood-current, while that of carcinoma takes place through the lymphatics.

DR. FORMAD could see no other cause for the tumor than the injury of the knee, previous to which the patient had never shown any symptoms of disease of the joint, while shortly after receiving the injury the tumor appeared. The tumor may not necessarily be malignant; there is an inflammation and the formation of cells; the malignancy will depend upon the looseness of the cells and the facility with which they can be transported.

DR. C. K. MILLS then read a paper on The Brain in Epilepsy, which, not admitting of abstraction, will be shortly published in full.

DR. BRUBAKER presented a specimen of Tumor of the Brain, which, with the accompanying paper, was referred to the Committee on Morbid Growths, whose report, with the paper, will appear at some future time.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

DECEMBER 11, 1882. DR. J. C. WARREN presided.

LIPOMATA.

DR. JOHN HOMANS read a paper on Two Cases of very Large Fatty Tumors within the Abdomen.

DR. ELLIOT remarked that he had the pleasure of assisting Dr. Homans in this operation; that it seemed especially interesting to him on account of the immediate recovery in spite of the fact that some of the contents of the bowel escaped into the abdominal cavity. Dr. Homans thinks that patients usually recover from the operation of making an artificial anus. If so, why would it not be a good operation in cases of cancer of the intestines to pull up the diseased part of the bowel, which is often only a small annular nodule, and sew it to the abdominal opening in such a manner that the disease should be left wholly outside the abdomen? If it did not slough off it could be removed later, and then the fistula might be closed. It seemed that in this way we could often remove cancer of the intestines more safely than by resecting a part of the gut.

DR. M. H. RICHARDSON said that he had had the opportunity of assisting at both operations in the first case reported, and it had seemed to him a remarkable triumph for modern abdominal surgery that the patient had survived the exploratory incision. Merely to replace the tumor had required all the strength of the assistants, and sewing it in seemed at the time a matter of form.

To those who had seen some of the previous operations of Dr. Homans, in which no idea of recovery had been entertained by any one, and yet in which convalescence had been rapid and recovery complete, the condition of this patient did not seem hopeless except for the fact that the mesentery had been entirely removed from the colon for a considerable distance. It is a well-known fact that when the intestine is deprived of its mesentery to any extent mortification ensues, the anastomoses being too remote for the establishment of sufficient collateral circulation.

DR. GANNETT thought that it would be very difficult, if not impossible, to remove such large retro-peritoneal tumors, even by enucleation, without separating portions of the meso-colon from either ascending or descending colon. In such a case the probability of necrosis of the isolated intestine was evident.

DR. HOMANS also spoke of a case on which he had recently operated, where he supposed from the preliminary examination that he had to deal with fibroids, but on operating he found the tumors to be ovarian; both ovaries were removed, and he had no idea that the woman would get well, but she has recovered completely.

DR. FITZ asked if any successful cases of the removal of these myxomatous tumors had been reported.

DR. HOMANS replied that he had never heard of any.

MEMBRANE FROM INTESTINE.

DR. GOSS showed a specimen of membrane-like discharge from the bowels of the patient referred to as Case I. in the paper on A Membrane-Like Affection of the Bowels, read before the Society in May, 1881. Since the paper was read until recently the patient has had but slight return of her trouble. The history of the present attack is as follows:—

Some three or four weeks ago Mrs. A. began to have feelings of general malaise, thought she was feverish, though the thermometer showed hardly any elevation of temperature. She had smarting of the eyelids, and smarting and dryness of the throat, then similar sensations under the sternum, followed by a burning and gnawing feeling at the stomach. These discomforts, to use her expression, "as though the mucous surfaces were generally affected," continued for several days, when, for three or four days, she had each day, following an injection of olive oil, a single evacuation of the membrane-like discharge, varying from one half to a whole teacupful in amount. There was scarcely any fæcal matter passed during this time. The evacuations were followed by a sensation in the hypogastric region, lasting for an hour or more, "as

though the bowels had been scraped." During the succeeding ten days the membrane-like discharge was less abundant, and the fæcal matter larger in amount. During the past week there has been but little of the peculiar discharge.

STENOSIS OF THE LARYNX.

DR. HOOPER spoke as follows: —

"I present this case of stenosis of the larynx as one in which the treatment by Professor Schrötter's ingenious method of mechanical dilatation has been followed by the happiest results. The patient has quite a remarkable history. He is a Roumanian by birth. Arriving in this country last Friday, he turned up at the Massachusetts General Hospital the same day. My acquaintance with him, however, is an old one, for during the many months I attended Professor Schrötter's clinic in Vienna, three winters ago, he was in the ward under daily treatment. He is twenty-eight years of age. In the winter of 1877, while traveling in Roumania, he and his companions were attacked by a band of robbers. His comrades were all killed. He himself was hanged to a tree, and subsequently left in the snow for dead with his throat cut, and three large stabs in the abdomen. Remaining on the ground for forty-eight hours, he was finally discovered and taken to Jassy, the principal town in Roumania, with frozen feet in addition to his other troubles. So runs the patient's story. Schrötter always affirmed that he was himself a robber and a cut-throat, and one of the greatest scoundrels of the century. Be this as it may, it is certain that when he first came under Schrötter's inspection, in June of the same year, the larynx was completely occluded by cicatricial tissue at a point superior to the external cut, and just below the vocal bands. Schrötter, operating through the mouth, divided the stricture with his laryngeal bistoury, and then employed his instrument for dilating the larynx.

"I am very glad to have this opportunity to show the instrument and the method of using it, for certainly the profession is indebted to Professor Schrötter for the treatment of this important class of cases. The instrument consists of special graduated plugs, made of tin or lead, of the triangular shape of the glottis, and with rounded edges. A brass rod passes through the centre of the plug, with an eye above for affixing a string, and a knob below for retaining it in position by means of a bolt inserted through the tracheal canula. When the plug is to be introduced into the larynx it is attached to a special canulated laryngeal director by means of the string passing through the tube. This tube is withdrawn as soon as the plug is retained in position by the bolt, whilst the string, which is left protruding from the mouth, can be tied round the ear. To withdraw the plug it is merely necessary to remove the bolt from the canula, and pull the plug up from the larynx by the string. This patient has now not only sufficient room for breathing purposes, but he has a remarkably good voice. He is interesting from another point of view, inasmuch as by looking through the external opening into the larynx the closure of the glottis during deglutition is very prettily shown."

DR. FIFIELD read the following paper: —

IDIOPATHIC ENDOCARDITIS.

M. C., aged seven years, had always been tolerably healthy, and had never had either rheumatism or chorea. She was descended from very strong, robust parents, neither of whom has ever exhibited the slightest tendency to rheumatism. When first seen, November 7th, she had a rapid pulse of 120 per minute and a temperature of 104° F. No cough or pain complained of, and but for the rapidity of the pulse and the elevated temperature would not have been considered very ill, as she sat up in bed and played with her doll, and was as much interested in the affairs of the family as ever. It was the temperature of 104° F. that induced me to examine the chest, half expecting to find a commencing pneumonia. With the exception of a patch of coarse breathing at the base of the left lung, and a very little dullness on percussion, nothing definite could be found so far as regarded the lungs. But I did hear all over the left side of the chest posteriorly a loud, well-marked bellows murmur, such as one might expect to find in a case of aneurism of the aorta. This loud murmur was found to proceed from the region of the mitral valve, and to be a regurgitant one, so loud and strong that it made itself heard all over the left chest. Together with this murmur I fancied that I heard a soft to-and-fro friction sound from the pericardium. With all this no irregularity of the pulse, not even the paradoxical one, keeping time with the respiration, which has so often been spoken of as a diagnostic of acute pericarditis. The treatment ordered was the application of three large leeches over the heart; four drops of tincture of digitalis every fourth hour; three grains of carbonate of ammonia every fourth hour. Milk and lime water diet. On the 8th she seemed somewhat better. Had rested well, and seemed to have no dyspnœa. Pulse 120. Temperature 102.8° F. The disease ran on with but little variation, excepting that all trace of the to-and-fro rub disappeared, if there had ever been any.

Although up to this time I had not been able to find in any author, English, French, or German, any allusion to idiopathic endocarditis as evidence of rheumatism *per se*, so strong was my conviction that at one time I changed the treatment to that of salicylate of soda, three grains every two or three hours, but was glad to run back to the treatment first adopted.

On the 20th the child seemed rather worse, refused a good deal to take her drinks, requiring persuasion. The mother reported her nights as bad, sleepless, complaining bitterly of pains running down her arms. The temperature was nearly the same, — 103° F. in the afternoon; pulse 120 to 130; respiration quicker. Still not the slightest evidence of rheumatism. If she had pain at night she always denied having any by day. It seemed to me, however, that the area of dullness over the heart's region had extended, and I summoned Dr. Rotch to my aid. Dr. Rotch will perhaps tell you better than I can that whilst he did not find the line of dullness reaching over the border of the sternum to the right, as would be expected, had there been any large amount of fluid in the pericardium, he *did* find the area of dullness increased to the left, indicating to him the presence of dilatation. I understood him to express a belief that the murmur was a regurgitant one. Nothing marked on the part of the lungs. I should have mentioned that I had examined the urine, but found nothing abnormal in it.

Both Dr. Rotch and myself, while acknowledging the extreme gravity of the case, had some hope of a favorable termination, so far as preservation of life was concerned. No change of treatment was made, but

from this day forward the little child failed. She refused all nourishment and stimulus; turned against her powders of ammonia and her drops; vomited very frequently; pulse raced faster; breathing became more and more hurried; tongue dry and parched; though with all this she sat bolstered up in bed, regarding all that went on with an observant but undismayed look, always ready to speak pleasantly and cheerfully. On the night of the 24th I found her still sitting up, brave as ever, though her lips were purple and her hands wet with the dew of the fast advancing sunset of life, pleased with some flowers I had brought her, and dying at midnight still holding some rose-buds in her hand.

In the course of my life I have seen two cases of acute endocarditis unaccompanied by any rheumatic affection; also one case of endocarditis with pericarditis, and one case of pericarditis, both equally free from rheumatic complication. The first case occurred some twenty years ago in a young child, perhaps five years of age. This case was seen in consultation with Dr. H. I. Bowditch, and so completely recovered that to-day in the young lady I am unable to detect any murmur whatever indicative of diseased heart. The second case was a young boy recovering from scarlet fever. This, too, went on to a favorable end, and now in the tall, strong young man I find nothing amiss with his heart. The third case, endo- with pericarditis, I saw some months ago in consultation in Quincy. A boy, perhaps nine years of age, who nearly eighteen months since had scarlet fever, followed by dropsy and albuminous urine, but was supposed to have fully recovered, being able to run and play with his schoolmates as well as the best of them. Here the friction rub was distinct, and beyond and above it was heard the mitral murmur. The boy's urine contained albumen in considerable quantity when I saw him. His treatment was leeches to the region of the heart, digitalis internally. He recovered well.

The fourth was a case of pericarditis reported, I believe, to this Society by Dr. Edes, together with a report of the autopsy. In this case I found, for the first time, the paradoxical pulse, first described, I think, by Kussmaul.

In no one of these cases did any rheumatic symptom make its appearance.

In August, 1882, Dr. Alfred J. Harrison read in the Section of Medicine, at the annual meeting of the British Medical Association, a paper entitled Primary Endocarditis. Dr. Harrison strikes his key-note at the very start (and I believe many physicians will be in full accord with him) by saying: "The subject of endocarditis is of primary importance in more senses than one. For a long time I have felt that endocarditis is of more frequent occurrence than is generally supposed, and I have often found during the examination of people apparently healthy, for life insurance and other societies, that slight abnormalities existed in the sounds of the heart, which made one incline to believe that there must have been at some time or other endocardial inflammation; and I now feel sure that many of these people had suffered from endocarditis without being aware of it. Many authors make allusion to endocarditis as a probable idiopathic disease, yet no one, so far as my knowledge goes, has ever recorded an actual case, with the exception of M. Barth, who, in *La France Médicale*, gives one, of intra-uterine fœtal origin." Dr. Harrison then proceeds to narrate three cases, two of them in his own house, and he speaks of a fourth still under treatment. Of these cases he says that the first had a marked symptom of rheumatism, namely, acid perspirations. The second was a case of endocarditis without any apparent rheumatic complication. The third had no rheumatic complication whilst under my care, but shows the results of it in a diseased heart; and now I can add a fourth also free from any rheumatic symptoms, unless the endocarditis be one form of rheumatism. Dr. Harrison's first case was that of a lad aged fifteen years, recovered; the second, his own son, fifteen and a half years, old, recovered; the third, a book-binder aged twenty-five years, recovered; the fourth, that of a girl thirteen years old, also recovered without having had a trace of rheumatism. Dr. Harrison remarks: "I have no doubt I have seen three of these cases during an attack of endocarditis, or if not endocarditis, what has it been? and I cannot help giving an opinion that it is quite possible to have an acute endocarditis, or rather, as I am inclined to put it, without any other symptom of rheumatism. I attach great importance to the salicylate treatment when it can be carried out."

Dr. Clifford Allbutt said that endocarditis was not infrequently the first and solitary event, perhaps, of acute rheumatism.

Dr. Balfour, of Edinburgh, wished to point out that they ought not to consider that every case of systolic murmur was one of endocarditis, that one might even have a certain amount of rheumatism with a systolic murmur without endocarditis. He had *never* seen any case of rheumatic fever in which one could not detect a systolic murmur. Pericarditis was a much more common thing than any one was at all aware of. But there was another note of warning that he wished to give, and that was not to regard every case of friction as a case of pericarditis. Influenza was often associated with, or rather resulted in, endo- and pericarditis.

In October, 1882, Dr. Robert Saundby, of Birmingham, published in the *Birmingham Review*, recently copied into the *New York Medical Abstract*, two cases of pericarditis.

His first case is given as one of pericarditis, endocarditis, pulmonary infarction. Pericarditis supervening in the course of chorea. No previous history of rheumatism; rheumatism in family. Recovery after blistering, and return of chorea. Relapse and death. The following is an abstract of the case:—

Florence K., aged eight years, had had scarlet fever and measles, and for a month before admission had been suffering from chorea. One of her sisters had had rheumatic fever three times, and one brother had had it once. When examined, September 2, 1881, he found a pale, sickly-looking girl, sitting up in bed, breathing rapidly, 45 to the minute, feeble pulse, 132. Temperature previous evening 103° F., but had fallen to 101.6° F. Limited patch of tubular breathing and crepitation at the lower angle of the left scapula. Heart's apex one inch external to the mammillary line. Over the apex a loud double murmur, the systolic portion being propagated in the direction of the axilla, and audible at the inferior angle of the left scapula. Three days later there was over the cardiac area, in addition to the previously described sounds, a distinct to-and-fro friction murmur. By the 9th physical signs of pneumonia had disappeared; pericardial friction unal-

tered. Blisters applied. 10th. Friction less; by the 12th had disappeared, except at one spot over the third costal cartilage. 14th. All friction had disappeared. 17th. A rough systolic murmur audible over the third cartilage, thought to be exocardial. Patient's general health continued to improve. 21st. This murmur had disappeared, and choreic movements had noticeably increased. 26th. Much better, and sat up in the afternoon. 28th. Remained in bed and began to be troubled with a teasing cough. 29th. Very pale but sitting up in bed complaining of her heart. Heart's action tumultuous, but no friction. 30th. Temperature 101° F., respirations 84; began to vomit. October 1st. Vomited frequently, restless, coughed up bloody froth. 7th. Feet began to swell. Died on the 8th.

Autopsy showed pericardium generally adherent. Adhesions soft and recent. Several patches of endocarditis, and both mitral and tricuspid orifices studded with vegetations. Slight pleuritis on right side, and scattered through the right lung were several dark-red, firm, tough patches, which sank in water. In the left was a similar patch.

Here the pericarditis was justly considered rheumatic in origin, for although she had not had it herself the family tendency was strong. Evidently, too, she had had endocarditis for a considerable time, possibly following the attack of scarlatina. When admitted she had a limited patch of pneumonia, set up probably by a hæmorrhagic infarction, of which so many were found in the lungs after death. The influence of blistering in procuring some improvement in the physical signs of pericarditis was very evident, but this proved very ill-founded, and the appearances at the autopsy made it difficult to understand how she could have appeared better even for a day or two. There was evidently a second attack of pulmonary infarction; this time in the right lung, and the cardiac muscle began to give way. The post mortem showed that this was œdematous and infiltrated with leucocytes. It is this condition that really constitutes the danger of pericarditis; the mechanical effects of the effusion, as Stokes wisely said, are too much exaggerated, while the true danger from the softened and inflamed myocardium is very imperfectly recognized.

CASE II. Man, aged twenty-three years. When examined, the day after admission, September 6th, temperature 101° F., pulse 102, respirations 24. Physical examination showed soft, double friction murmur, loudest over the fourth left interspace. All other organs normal. On 9th the friction was more audible. Blistered. That evening temperature rose to 103° F., but fell in the next twenty-four hours to 100° F. On the 12th friction diminished. On 14th only a slight, soft murmur. 17th. Pulse irregular, only 50 per minute. It appeared that he had been out of bed at the water-closet. After rest the pulse rose to between 80 and 90. On 21st heart intermitted regularly every fifth or sixth beat, then suddenly changed and went quite regularly. He continued to improve, and was discharged on October 6th. Seen again on the 20th, when the heart sounds were quite normal.

This case was one that would be called by many idiopathic pericarditis. Walshe said some years ago that "alleged idiopathic pericarditis becomes rarer every year in proportion as the evolution of diathetic diseases grows more fully understood," and added, "I have never yet seen a positive case of the kind." Yet early this year Dr. Walter G. Smith related three cases of idiopathic pericarditis at a meeting of the Medical Society of the College of Physicians, Ireland, and maintained that they had occurred independently of any injury, or other local cause, or of extension of inflammation from neighboring parts, or of any relationship to rheumatism, chorea, exanthemata, renal disease, pyæmia, tuberculosis, or the puerperal state.

"I should, therefore, be inclined to admit that this case was idiopathic, if I did not believe that rheumatic pericarditis may occur by itself without giving rise to the general phenomena of rheumatism."

PROCEEDINGS OF THE MONTHLY PHARMACEUTICAL MEETING OF THE MASSACHUSETTS COLLEGE OF PHARMACY.

B. F. DAVENPORT, M. D., REGISTRAR.

THE U. S. PHARMACOPŒIA.

AT the regular meeting of December 12th a series of *seriatim* discussions of the subject of each title of the new revision of the U. S. Pharmacopœia was begun, which are to extend through the meetings of this season.

There was a general expression of approval of this revision as a whole, very complimentary remarks being made concerning Dr. Charles Rice, of New York City, chairman of the committee, to whom much of the credit is due. Regrets were, however, expressed that it had made no provision for being generally considered to have gone into full effect at some specific date, such as on January 1, 1883, in order to have removed any lingering doubt in the minds of any as to whether the prescriber was to be considered as having intended or the dispenser was to be expected to put up on any recipe the preparations made according to the 1870 or the 1880 revision. In such cases as with tinct. opii there is a difference of fifty per cent. in that made according to the two revisions.

In renewals of recipes dispensed before the appearance of the new revision was the pharmacist to put up tinct. opii according to the old or the new revision, after the latter had come into general use. After what date was the drug analyst under the new Adulteration of Food and Drug Act to deem as adulterated within the meaning of that act preparations which did not conform to it in strength, quality, or purity. Under the present circumstances it would seem that, as there cannot well be but one legal U. S. Pharmacopœia, the new revision must be considered upon its first appearance to have superseded the old. Here, however, as in all cases of doubt in dispensing in the mind of the pharmacist as to what was the intent of the prescriber, that should first, if possible, be removed before the recipe is put up. If, however, that cannot be done, he should either decline to dispense at all, or else put up according to the apparent call, that is of the new Pharmacopœia, informing, however, the presenter of the recipe of the nature of the doubt, thus freeing himself from all possible responsibility, but throwing it back upon the physician, where it naturally belongs, as he should so write his prescriptions as to leave no such doubt. Pharmacists, however, who for any reasons should hereafter sell a preparation made according to the old revision of 1870 should protect themselves by labeling it U. S. P. 1870. It would seem that all renewals of

old recipes should be exact renewals thereof unless the change to the new preparation be sanctioned by the prescriber.

The new class of official preparations, the abstracts, were well thought of, although not at present frequently prescribed in this vicinity.

THE NEW YORK ACADEMY OF MEDICINE.

ELECTION OF OFFICERS.

An election of officers occurred at the Academy of Medicine Thursday evening, January 4th, which resulted as follows: President, Dr. Fordyce Barker (reëlected); Vice-President, Dr. H. P. Farnham; Recording Secretary, Dr. W. H. Katzenbach; Corresponding Secretary, Dr. J. G. Adams (reëlected); Treasurer, Dr. William F. Cushman; Trustee, Dr. Gouverneur M. Smith (reëlected); Treasurer of the Board of Trustees, Dr. Charles Wright (reëlected); Member of the Committee on Admissions, Dr. E. L. Partridge; Member of the Committee on Ethics, Dr. H. E. Crampton; Member of the Committee on Education, Dr. John C. Dalton; Member of the Committee on Library, Dr. A. McLane Hamilton. On this occasion the reports of the various committees were read, and in that of the Committee on the Library it was stated that the Academy now owned more than nineteen thousand bound volumes, and five thousand pamphlets. During the year the library and reading-rooms had about four thousand visitors.

The paper of the evening was by Dr. F. H. Bosworth, on the subject of Tumors of the Nasal Passages, and it was discussed by Drs. Lefferts, Beverly Robinson, and Lincoln.

Under the popular presidency of Dr. Barker the Academy has steadily advanced in prosperity, its library has received constant and valuable accessions, and the semi-monthly meetings have been well attended, and usually of considerable scientific interest.

Recent Literature.

A System of Human Anatomy; including its Medical and Surgical Relations. By Harrison Allen, M. D., Professor of Physiology in the University of Pennsylvania, etc. Section I. Histology, by E. O. Shakespeare, M. D. Section II. Bones and Joints. Philadelphia: Henry C. Lea's Son & Co. 1882.

The appearance of the book, the first two parts of which are before us, marks an epoch in medical literature. It is the first important work on human anatomy that has appeared in America, and more than this its scope is new and original. Let the author speak for himself: "Works on anatomy may be placed in two groups: Those written by scientists which have no special application of any kind, and those written by surgeons which have a decided leaning to surgical application. . . . It requires but little discernment to detect the faulty plan upon which both these varieties of books are constructed. The scientist necessarily lacks clinical knowledge and sympathy; the surgeon lacks interest in all but one class of subjects." Though thinking this saying a little severe we are quite ready to admit that there is room for a serious work on a new plan, and to cordially welcome the one Dr. Allen has given us. It is intended to be both descriptive and topographical, scientific, and practical, so that while satisfying the anatomist it will be of value to the practicing physician. A novel feature in the book is the discussion of the effect of the structure of special parts or regions on diseased action within their limits, which will be emphasized by the reports of apposite cases. Histology, normal growth, monstrosities, and variations are all to be treated of. Such a work is certainly novel, and if the execution equal the conception it will bring the greatest honor to the author.

The section on Histology is by Dr. Shakespeare, who is well known as of merit in this branch of science, and the winner of the Warren Prize a few years ago. We have noticed nothing particularly original in it, but it is well written, up to times, and satisfactory. It is well illustrated by wood cuts in the text, and by twelve full page beautifully colored lithographs. Most of the figures are not original, but as they are good this is no defect; but we are absolutely astonished at the incomprehensible way in which perhaps half of them are credited to the wrong authors. Thus we find a large number of very familiar figures ascribed to Gray or to Carpenter, who are as innocent of having made them as Dr. Shakespeare himself. This is the more extraordinary as in the preface to the eighth edition of Gray it is honestly stated that illustrations "have been borrowed with permission from well-known text-books, such as Frey's Histology, Stricker's Handbook, and Quain's Anatomy." Moreover, when a figure that first appeared in Stricker's Handbook escapes being given to Gray or Carpenter it is, we believe, invariably given to Stricker instead of to the author who wrote the chapter in the Handbook, and to whom of course the credit belongs.

The second section, on Bones and Joints, is, of course, by Dr. Allen himself. The introductory general remarks on bones are very satisfactory and comprehensive. Among other subjects discussed are the peculiarities of the living or fresh bone, the identification of bones, bones as mechanical agents, the causes of variations in their shape, and the way in which the shape may be modified by diseased action. The causes of variations of shape within normal limits are twofold; the vascular supply and muscular action, concerning both of which there are interesting remarks. The vertebral column is then taken up; first a brief description is given of some of the essential parts of a vertebra, and then, before the systematic description of the vertebræ, the column is considered as a whole. The mechanics are carefully studied both in their normal and pathological relations. The description of the various bones of the skeleton is marked by its unconventionality, the main features are clearly pointed out in few words. The utter absence of even the appearance of pedantry, which we have come to think almost inseparable from anatomical work, is very refreshing. The internal structure of the bone receives attention as well as the outside, and this is, we believe, a new feature in any of the larger anatomical treatises. The description of each bone is followed by remarks on its variations, and on the pathological processes or accidents to which it is particularly liable.

The characteristic features of the descriptions stand out especially in the treatment of the bones of the

skull. The temporal bone is described in a way that will appear even startling to those conversant only with English works. We are surprised that Dr. Allen acknowledges only one temporal ridge, though parts of two are distinctly shown both in the drawing of the parietal bone and in that of the side of the skull. The innominate bone is also treated in a new manner. We suppose it is by inadvertence that the tendon of the obturator internus is said to pass through the great sciatic notch, and we should say the same of the statement that the superior and inferior gemelli both arise from the spine of the ischium, were it not that the places of their origin are so represented in the plate also. There is a passage in the description of the clavicle which we fail to understand, and which seems to us quite inaccurate. "Stretching across the under surface of the body from the conoid tubercle in front to the posterior and inferior border, is an oblique line that limits the surface of origin of the pectoralis major muscle inferiorly." Now as the conoid tubercle is on or near the posterior border, and as the pectoralis does not extend nearly so far outward, we not only cannot admit the statement, but we cannot conceive what clerical or other error is at the bottom of it. The illustrations of the bones are very fine. The names of the parts, muscular attachments, etc., are printed either on the figure or close beside, so that they are easily recognized. Perhaps many of the figures are too much shaded, by which they lose in clearness. A more serious criticism must be made against the drawings of some of the long bones, which are shortened out of all proportion, apparently to make them fit into the plate.

The chapter on Joints begins also with an excellent discussion of the subject, embracing many interesting considerations, such as the influence of atmospheric pressure and the development of joints. Dr. Allen's classification differs a good deal from the usual one. There are, according to him, four chief divisions of joints. *Sutura* includes the union of bones arising from membrane, and *Synchondrosis* that of those arising from cartilage. *Symphysis* includes the union by fixed fibro-cartilage of bones which are without incrusting cartilage, and *Diarthrosis* includes joints with incrusting cartilage and synovial membranes. According to this plan, the so-called sacro-iliac synchondrosis and the joints between the bodies of the vertebræ are to be reckoned symphyses. We are not prepared to say how this nomenclature will stand the test of experience. It is hard to accept a new meaning for a term with which we are already familiar, but we are thankful for any change that will free us from the complicated system replete with jaw-breaking names now in use. We have no space to discuss in detail Dr. Allen's treatment of the joints; suffice it to say that it is admirable, and that any criticisms we might make would refer to very trifling points. It seems to us, indeed, that not enough is said about motions, but probably this want will be made good in the section on muscles.

The illustrations of the joints made from the author's dissections deserve the highest praise. They bear witness to his skill with the scalpel, and to that of the artist with his pencil. They are well conceived and well executed, handsome artistically, and clear anatomically.

We trust the reader who has followed us so far will have gathered that there is a great deal in this work that to receive justice requires much more space than we can give to it. As the author points out, such a work as he has undertaken is necessarily encyclopædic, and the result shows that he has brought to it a mind well prepared for the task by extensive reading, critical judgment, and literary ability. We can cordially recommend the work to the profession, believing that it is suited not only to those of scientific tastes, but that it will be of use to the practicing physician. On the other hand we must wait till more of the work has appeared before expressing any opinion as to whether it should supersede the works now in use for students who are beginning their studies. Advanced students may certainly profit by it. The sections of the book appear in neat covers, and the type and paper are handsome. T. D.

The Chamberlens and the Midwifery Forceps. Memorials of the Family and An Essay on the Invention of the Instrument. By J. H. AVELING, M. D., F. S. A. London: J. & A. Churchill. 1882.

The writer of this biographical sketch has been collecting materials relating to the Chamberlens for ten years, he tells us, and yet it is only quite recently that he has mastered the subject and dispelled from his mind the confusion caused by there being three Peters and two Hughs. He warns the profession against accepting as true any account of the Chamberlens published before this date, no matter how trustworthy in other respects the author may be.

Dr. Peter Chamberlen, hitherto regarded as the inventor, or rather re-inventor of the forceps, Dr. Aveling believes to have no claims to this distinction, his uncle Peter Chamberlen the elder, who came to Southampton from Paris as a child with his parents, about 1570, being the real inventor.

Much confusion has arisen from the fact that Dr Peter Chamberlen's father and uncle were, curiously enough, both named Peter, the former being known as Peter the younger and the latter as Peter the elder.

A Manual of Hypodermatic Medication. The Treatment of Diseases by the Hypodermatic Method. By ROBERTS BARTHOLOW, M. A., M. D., L.L. D. Philadelphia: J. B. Lippincott & Co. Fourth Edition. 365 pages.

In the first few pages the history and the local and systemic effects of subcutaneous injections are briefly considered, the latter in a very practical way. It is probably too late to succeed in substituting "hypodermatic" for "hypodermic;" subcutaneous is sufficiently good.

Most of the work is devoted to the action and uses of numerous drugs which may be used subcutaneously. Among them morphia and atropia, together with their physiological antagonism, and the treatment of the opium habit, receive most attention, more than one third of the book being given to them. Among more than thirty drugs the proper form of solution, the physiological action, and therapeutic uses of pilocarpine, ergotin, digitalis, salts of quinia, mercury, strychnia, iron, chloral, chloroform, and ether are given.

Like all of Professor Bartholow's writings this one is interesting and instructive. There is no better work on the subject. As a manual it would have greater value if it were smaller.

Microscopical Morphology of the Animal Body in Health and Disease. By C. HEITZMANN, M. D. With three hundred and eighty original engravings. New York: J. H. Vail & Co. 1883.

A work by a microscopist of Dr. Heitzmann's reputation will be sure both to deserve and to attract attention, especially when it is understood that it shows normal and morbid histology in the light of his original theories. The book contains several chapters that have appeared before as separate articles both in English and German, and some chapters are written by other observers. Still Heitzmann's spirit informs the whole. We are a little amused at his way of quoting complimentary passages from the works of his friends and pupils. We must beg leave to present to our readers rather a long passage from a paper by Dr. Elsberg, which, while it gives a good idea of the author's views, is a striking instance of the peculiarity we refer to: —

"It is the merit of Heitzmann to have discovered, in the first place, that the living matter in its simplest form, as seen in an amœba, the so-called basis matter of life, to which hitherto the name of protoplasma has been applied, but which I propose to designate as bioplasson, is not without structure, as has before his accurate investigations been supposed, and that its structure is that of a net-work, in the meshes of which the bioplasson fluid, or the not contractile, not living portion of the organism exists. He discovered that the granules, which had been observed before, are not foreign or accidental occurrences, but that they are part and parcel of the living matter; that, in fact, they are the thickened points of intersection of the threads of bioplasson constituting the living net-work. Extending his investigations he found that what was true of the structure of bioplasson in the amœba, where a single unit-mass of living matter constitutes the entire individual, is true of the structure of bioplasson of all, even the highest, living organisms. The idea connected with the word *cell*, when this term was first applied to the organic form element, had, with the advance of microscopical and histological knowledge, gradually undergone such changes that the name had become a complete misnomer. Although 'cells' were still spoken of, it was understood that their essential constituent was living matter individualized into small, distinct masses. The existence in these of a nucleus, a nucleolus, even a nucleolinus and granules, was known; even thorns and processes had been observed occasionally. But all this knowledge of the structure of these elementary masses was fragmentary, until Heitzmann announced that the nucleus, nucleolus, granules and threads are really the living contractile matter; that it is arranged in a net-work containing in its meshes the non-contractile matter which is transformed into the various kinds of matrix characterizing different tissues; and that the tissue unit-masses of bioplasson throughout the whole body are interconnected with fine threads of the same living matter."

It is greatly to be regretted that the author does not confine himself to observations and legitimate deductions, but allows himself the wildest generalizations and speculations. What in the name of common sense are we to say to one who tells us that the human body is constructed on the plan of an amœba? And when we hear that it is by "will" that living matter may overcome the force of gravity our own gravity would be overcome were it not that the melancholy aspect of such pseudo science affects us more strongly than the ludicrous one.

Dr. Heitzmann, as is well known, has studied cells very zealously in hopes of determining to what extent their appearances may be taken as indices of the well being of the individual. That such a relation should exist is plausible, indeed probable, and Dr. Heitzmann is entitled to much credit for his assiduous labors, but we cannot but fear that, as is very natural, he should have been led away by his enthusiasm to believe that more has been accomplished than lookers on will admit. The following little anecdote speaks for itself: —

"Life insurance should be based upon microscopical examination, as well as on percussion and auscultation. Marriages should be allowed, in doubtful cases, only upon the permit of a reliable microscopist. Last season a young physician asked me whether I believed in the marriage among kindred. He fell in love with his cousin and so did his cousin with him. I examined his blood, and told him that he was a 'nervous' man, passing sleepless nights, and had a moderately good constitution. The condition being suspected in the kindred lady, marriage was not desirable for fear that the offspring might degenerate. So great was his faith in my assertions that he gave up the idea of marrying his cousin, offering her the last chance, namely, the examination of her blood. The beautiful girl came to my laboratory, and, very much to my surprise, I found upon examination of her blood a first-class constitution. The next day I told the gentleman, 'You had better marry her.'"

The illustrations, as might be expected from the well known skill of the author are, with few exceptions, admirable. That part of the text which is devoted to recording microscopical structure is of varying merit. Some descriptions are very good, others are wanting in clearness.

There is much to praise in the book, which certainly should be absent from the collection of no one who would keep himself acquainted with the progress of histology and watch the influence of leading minds on its development, but we must add with regret that we cannot recommend it as a safe or satisfactory guide to the student. T. D.

University College Course of Practical Exercises in Physiology. By I. BURDON SANDERSON, Professor of Physiology in University College, London. Philadelphia: Blakiston & Co. 8vo. Pages 75. 1882.

This little book is one of a class with which the last few years have made us familiar, it being a collection of exact directions for a series of carefully chosen elementary laboratory experiments. The directions are well given, brief, definite, and sufficient, and helped by a few useful though simple diagrams. The experiments are admirably arranged, and exhibit considerable ingenuity in attaining simple methods, a merit which the preface attributes largely to Dr. Augustus Waller. The largest fraction of the book is devoted to muscles and nerves, most of the remainder to chemical experiments. A few pages are devoted to demonstrations to be made by teachers. It seems improbable that the book could be used in an American school, where the courses are differently arranged. The very high price, $1.12, for a small book, we think will suffice to prevent its general use, despite its value and accuracy.

Medical and Surgical Journal.

THURSDAY, JANUARY 11, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

GOVERNOR BUTLER'S MESSAGE TO THE MASSACHUSETTS LEGISLATURE.

So much was expected by the curious from the inaugural message of Massachusetts' governor, it is not astonishing that, notwithstanding its great length, the rare and strange in it should have fallen below the anticipations of many. It was generally supposed that he would bear with a heavy hand upon the ungainly Board of Health, Lunacy, and Charity, whose unwieldy proportions and incompatible composition we have so often had occasion to call attention to. And, indeed, Governor Butler has made it plain that he is sensible of the absurdities involved in the present form of organization of that Board, and alive to some of the particulars in which important interests of the State suffer in consequence.

In discussing the management of the insane of the State the following passage, characteristic of the speaker, and containing some true though not new comments upon the conjoint polysyllabic Board, occurs: —

"The general supervision of these institutions is, by the Act of 1879, put under the Board of Health, Lunacy, and Charity, who manage them, so far as they are managed at all, through a commission of lunacy, and this is in addition to the other duties of this Board, to take care of the health of the paupers and a large proportion of the criminals of the State, and also their duties imposed upon them by statute, of ascertaining the quality of everything that everybody in the Commonwealth eats and drinks, and all the drugs and medicines we consume, and the quality of the cosmetics that the ladies are supposed to use. It will not be wonderful if we find such things have to be neglected by so versatile and overworked a board, especially as they all work without pay.

"Members of the Board interested in and capable of taking charge of the sanitary condition of the State find their duties in taking care of paupers distasteful; while those with an aptness for paupers have no sufficient knowledge of the laws of mental alienation to have superintendence of lunacy; and those having that scientific knowledge which would fit them for the latter work have no taste for looking after the sewerage or paupers, prisoners or cosmetics of the State. This incongruity has led to the resignation of nearly a majority of that Board, losing to the State the services of some of the best-fitted men, for portions of the work, upon it."

These remarks precede a sensible suggestion that no more money be spent in architectural follies, but that simpler provision be made for the care of the increasing number of the insane.

True as are the remarks in the above paragraph, they contain nothing of a sensational character, — unless we exclude the ladies' cosmetics, — and nothing which has not been stated quite as forcibly many times before. It is certainly very possible that, had the message aimed simply at creating a sensation at the expense of the Board, even more effective subjects in connection with the administration of some of its departments than the unaudited sale for dissection of almshouse babies might have been ventilated. If the knowledge of such material existed it may be reserved for treatment in one of the promised special messages, or it may be thought it can be made more useful in some other fashion. But we confess that all this part of the message seems somewhat tame and trivial compared with all that rumor promised.

Much as we have deplored the abolition of the old Board of Health, and poorly as we think those who were responsible for establishing the present mixed Board have deserved of the Commonwealth, we yet do not see any reasonable hope of a better order of things being established under the present executive. It is probable that several vacancies will occur upon the Board of Health, Lunacy, and Charity during the coming year; by filling these with able, earnest, and experienced men — if such will consent to serve on the mixed Board — Governor Butler can do something to mitigate some of the shortcomings which afflict him. We doubt if more will be in his power to do directly, however excellent his intentions may ultimately prove to be.

It is little to the credit of Massachusetts that she should allow such departments as those of health, of lunacy, and of charity to be brought within the domain of active politics; their efficiency has been impaired, and it would indeed be poetical justice if the individual whose dreaded election to the chief magistracy was made the ostensible excuse for their former consolidation should, however indirectly, be instrumental in restoring them to a more suitable independence.

The harm done to these departments is not confined, however, merely to the form of organization. The best men are not often willing to devote their energies and give their labor to the advancement of any work which is liable to be upset at any time according to the supposed exigencies of the political situation.

We have treated this subject seriously, as it is to us a serious one, but do not wish to be supposed incapable of appreciating the Governor's peculiar humor, or to be forgetful of the existence of a "gallery."

ROUTINE PRACTICE.

IF there is one tendency in medicine more mischievous than any other it is the tendency towards routine. Conversely, it may be said with almost equal truth that if there is one occupation in which routine methods are unfortunate it is the practice of medicine. Yet our profession is not the only one where this failing exists in marked degree. All artizans show it. Your carpenter falls into certain ruts in his way of doing things, and if there is something a little out of his ordinary line of experience, which you wish done, the chances are that he will be quite at a loss. Your plumber, mason, or painter does his

work in a perfunctory sort of fashion, and if you have certain changes which you desire to introduce in the method of its execution, or a new object which you hope to accomplish, he is likely to respond helplessly that he never learned to do that. Excepting for the manual facility, you find yourself more competent to devise and execute anything which is a little out of the beaten track of any journeyman laborer than that workman himself. "Remember," says Herbert Spencer, "how generally improvements in manufactures come from outsiders, and you are at once shown with what mere unintelligent routine manufactures are commonly carried on. Examine into the management of mercantile concerns and you perceive that those engaged in them mostly do nothing more than move in ruts that have gradually been made for them by the process of trial and error during a long succession of generations. Indeed, it almost seems as though most men made it their aim to get through life with the least possible expenditure of thought."[1]

If this tendency is vicions in those occupations where for the most part the work consists in carrying out the plans of another brain, what shall we say of it in that profession where the work is never alike in any two cases? No two patients have the same constitutional or mental proclivities. No two instances of typhoid fever, or of any other disease, are precisely alike. The intelligent and efficient care of any case of illness demands a consideration of all the circumstances which are peculiar to itself and of the traits of body and of mind which are peculiar to the patient. No "rule of thumb," no recourse to a formula-book, will avail for the proper treatment even of the typical diseases. Above all, what is the mere *routinist* to do in the presence of those protean groups of symptoms which characterize the complicated associations and conditions of our modern social life?

A prolific writer on medical topics, in a pamphlet on the longevity of brain-workers, speaking particularly of physicians, says that the nature of the work is favorable to health in respect that the hardest portion of it, which consists in the *learning*, comes during that period, from twenty to forty, when man is best capable of severe labor, and that after that age there is only practice, which is comparatively easy. And he compares this with the case of the mere muscle-worker, whose tasks undergo no alleviation with his advancing years. We cannot but regard this as an unfortunate comparison. We do not believe that the actual mental labor of the intelligent and conscientious physician diminishes after his middle age. With an increasing practice there is an increasing number, if not proportion, of cases requiring careful, painstaking study. An easy-going application of knowledge gained in youth is not the true conception of the practice of medicine at any period of life. It has an unpleasant suggestion of routine methods.

While hospital service is, when rightly used, of inestimable value as affording the best opportunity for studying disease and observing and recording its phenomena in a complete and orderly manner, as well as giving exceptional chances for controlling conditions, yet this very work, capable of yielding so much advantage, is often debased to the merest routine. With a large number of patients, and especially with much outside business, men are tempted to slight their work, and to treat the cases merely with reference to a diagnosis (itself more or less imperfectly formed) rather than with reference to the individual needs. This is especially true of dispensary practice. Indeed, we have heard a physician of eminence counsel a young man not to undertake dispensary work, undoubtedly from the consideration that with the large numbers of cases, many of them uninteresting personally and professionally, which the young man would be called to treat, the tendency would be very strong toward superficial, unconsidered, and routine practice. Of course it is possible, by being on one's guard, to avoid this snare, and so to take the good of an increased number of cases, remembering that each presents its point of peculiarity and interest if one only has time to search it out. But to this end one can hardly be too much impressed with the shiftless, unscientific, and fatal results of routine practice.

[1] The Study of Sociology, p. 305.

THE COMPULSORY DISINFECTION OF TYPHOID EXCRETA.

IN response to the discussion in the Clinical Section of the Suffolk District Medical Society, to which a paper by Dr. Morton Prince on Typhoid Epidemics and the Necessity for Compulsory Disinfection gave rise, that Section passed the following resolutions, which were subsequently referred to and acted on by the District Society: —

Resolved, First, That in the opinion of this Society the history of the past has shown that one great element in the causation and spread of typhoid fever lies in the diffusion of the poison by the intestinal discharges of persons sick with the fever, and this Society recommends that their discharges be thoroughly disinfected in every case before being disposed of in the privies and sewers.

Resolved, Second, That we as members of this Society pledge to the State Board of Health, Lunacy, and Charity, and to the Board of Health of this city, our moral support and hearty co-operation in carrying out whatever measures they may deem necessary for the prevention of typhoid fever and other contagious diseases.

Resolved, That in the opinion of this Society the number of towns availing themselves of the present statute relating to the appointment of boards of health and health officers throughout the Commonwealth is much less than the public welfare demands, being much less than half the whole number, this Society recommends to the Suffolk District Medical Society to memorialize the State Legislature for the enactment of such laws as are necessary for the prevention of disease and to raise sanitary legislation to the present standard of sanitary science.

Resolved, That the secretary of this Society is hereby directed to present these resolutions to the Suffolk District Medical Society at its next meeting, with a request that a committee be appointed to take them into consideration.

The Boston Board of Health has already issued a circular for the purpose of inducing greater care in preventing the spread of typhoid fever. In it a simple statement is given of the most usual sources and ways of diffusion of the typhoid poison, accompanied by plain directions for the management of the sick-room, and for the disinfection of the discharges, the importance of which is duly dwelt upon. For this

latter purpose a five per cent. solution of chloride of zinc is recommended as being effectual, and without odor or stain.

As far as compulsory disinfection goes this is about as much as can be done by boards of health. The good work of propagandizing the gospel of salvation from typhoid must be carried on by the individual medical missionary, and inculcated line upon line, precept upon precept. Practically the disinfection will be voluntary rather than compulsory. A good deal may thus be done to diminish typhoid, but we need not indulge the illusion that we are in any way in a position to banish it. It is, we fear, a form of disease which we are likely to have always with us. With the most willing and intelligent coöperation on the part of health boards, of physicians, and of the public, the mild, unrecognized, ambulatory cases alone would insure a survival of the germ or ferment, and any of the carefully recorded epidemics, such as that at Lanten or at Caterham, show the extreme tenacity of life and diffusibility of the poison as contained in the excreta from the bowels.

MEDICAL NOTES.

— We have received the prospectus for the current year of the *Annals of Anatomy and Surgery*. This journal devotes itself particularly to "those lines of anatomical research which have a bearing upon practical surgery," and in order that it may be under no restraint as the organ of any one society it has ceased to represent especially, as heretofore, the Anatomical and Surgical Society of Brooklyn, and the editors will henceforth conduct it upon their individual responsibility. We welcome the *Annals* as a worthy exponent of American surgery.

— The U. S. Marine Hospital Service has issued a circular to the masters of steamboats plying upon western waters, offering the services of that department for the free vaccination of all the crews of such vessels, and giving suggestions for the burning of infected bedding instead of its being thrown into the water. This circular is called forth by the fact that one hundred and forty-three cases of small-pox were taken from ninety-five vessels during last season.

— The appropriation for the Army Medical Museum and Library, in regard to which we expressed our opinion, was, on motion of Mr. Butterworth, restored to the usual amount, namely, $10,000.

— Dr. Eliza M. Mosher, Superintendent of the Woman's Prison at Sherborn has resigned on account of ill health.

NEW YORK.

— At a meeting of the Board of Estimate and Apportionment, held December 18th, Dr. Chandler asked for $10,000 to defray the expenses of inspecting defective plumbing.

— The last report of the Department of Public Works shows that during July, August, and September the public baths were used by 1,460,800 males and 555,833 females.

— Dr. J. Lewis Smith read a paper on the Sequelæ, Complications, and Treatment of Scarlet Fever before the Section of Theory and Practice of the Academy of Medicine on Tuesday evening, December 19th.

— The death of James Hurst, State Taxidermist, which occurred at Albany, December 18th, in the seventieth year of his age, is said to have been caused by the absorption of arsenic used in his occupation.

— Dr. M. A. Pallen having resigned the chair of Gynæcology in the New York Post-Graduate School, Dr. B. F. Dawson has been appointed to the position.

— For some time past the committee on the course of studies of the Board of Education has been investigating the question whether the pupils in the public schools are not overtasked, and at a meeting of the Board held December 20th made their final report, which was, in part, as follows; "The general purport of the testimony given would lead to the opinion that the course of study, as a whole, is not excessive in its requirements; that it does not impose labor that cannot be accomplished without detriment to the health, strength, and comfort of either teacher or pupil in our public schools. In making this general statement it is recognized and admitted that individual instances have occurred in which objections might be made to the requirements of the course as excessive, and to its unfavorable influence upon the pupils. But when we reflect that at least 125,000 children are in daily attendance, and that the course of study was prepared with the view of meeting the needs and ability of the many and not of the few, these individual instances are not numerous and strong enough to serve as an indictment against the course, or even as a reasonable charge against its general merits, usefulness, and applicability."

— In his message of January 1st the new mayor, Mr. Edson, congratulates the city authorities, and especially the Board of Health, on the comparative freedom of New York from contagious diseases during the past year, and states that he is informed on the best authority that at the present time there is not known to exist here a single case either of small-pox or of typhus fever. The constant surveillance which is exercised over the ventilation, the drainage, the plumbing, and other sanitary conditions of old buildings, he says, is illustrated by the fact that 20,583 orders for the abatement of nuisances were issued during the year ending November 30, 1882. In speaking of the public schools he says that it is shown by recent careful estimates that the school-room space in the whole city is equal to the accommodation of 152,030 pupils, allowing to each pupil the modicum of sitting-room and air-space deemed proper by authorities in sanitary science, while the average attendance is only 129,794; showing an excess of school-room space over present necessities equal to the accommodation of more than 22,000 pupils. As a fact, however, the schools in many portions of the city are very much overcrowded, and the mayor suggests, therefore, that some measures should be taken to provide requisite school accommodations in such parts as are in need of them, and, perhaps, through some change of policy on the

part of the Board of Education, to arrive as rapidly as possible at a more equitable distribution of the school-room space.

— The appropriations for the various city departments for the coming year amount to over a million dollars more than those for 1882. Of this increased sum the Department of Charities and Correction gets $60,000 for a new insane asylum and $25,000 for the purchase of a farm for insane patients, and the Board of Health $50,000 for the erection of a hospital for children suffering from contagious diseases, which will be located at the foot of East Sixteenth Street.

— Governor Cleveland, in his inaugural message to the legislature, uses some very plain language in regard to the emoluments of the health officer of the port of New York. After stating that the amount paid from the State treasury for the maintenance of the quarantine establishment for the last fiscal year, including the salaries of three quarantine commissioners, was $35,000, he goes on to say that from a report of a special committee appointed by the Senate in 1881, it appears that while the fees and perquisites of the health officer were very difficult of exact ascertainment, the committee came to the conclusion that the net income of that officer did not average less than $40,000 per annum, and might, in favorable years, reach a sum upwards of $60,000. "No one," he continues, "can read this report without being convinced that this estimate is a very moderate one, and represents a sum of money derived from the commerce of our principal port, in startling disproportion to services rendered, and greater than any man ought to receive for official service. If the fees and charges are so high that the commerce of the port is injuriously affected by their collection, they should be reduced. If they are to be continued, all but a reasonable sum for the salary of the health officer should be applied, if legally possible, to the support of the quarantine establishment; and if this cannot be done, they should be so limited as to yield to the officer a fair salary only, thus relieving our commerce to that extent."

The information in regard to the charitable institutions of the State in the Governor's message is furnished by the State Board of Charities. During the year the Board has returned to various countries of Europe forty-eight lunatic, idiotic, crippled, blind, and otherwise disabled alien paupers, who have been shipped to New York by the authorities of foreign cities, or by relatives or guardians, in order to shift the burden of their support to American public charities. The number of insane in the various institutions on the 30th day of September, 1882, was 10,443. Of the insane in the State institutions, 2022, entirely of the chronic class, were confined in the Willard and Binghampton asylums. The number of insane persons in the several institutions throughout the State is 384 in excess of those reported at the close of the previous year. In view of the constant increase of insanity Governor Cleveland says: "The problem of the custody, care, and treatment of this pitiable class is crowded more and more upon the attention of all thinking citizens, and those who make their laws. I am satisfied that existing statutes on this subject need amendment. . . . If, as seems to be generally conceded, insanity is a disease needing special and peculiar treatment, it must be that the chance of improvement in those affected by this malady would be greatly increased if they could have the care afforded by an institution especially established for its treatment."

PHILADELPHIA.

— The annual meeting for the election of officers of the County Medical Society was held January 3d. The following were elected for the ensuing year: President, Dr. William H. Welch; Vice-Presidents, Drs. Addinell Hewson and W. R. D. Blackwood; Recording and Reporting Secretary, Henry Leffmann; Corresponding Secretary, H. Augustus Wilson; Assistant Secretary, Joseph S. Neff; Treasurer, L. K. Baldwin; Librarian, C. M. Seltzer.

Miscellany.

A TOAST FROM DR. FORDYCE BARKER TO DRS. HOLMES AND BIGELOW.

We take pleasure in being permitted to print the following pleasant and characteristic note from Dr. Fordyce Barker, of New York, to Dr. C. B. Porter, of this city, containing a toast to Drs. Holmes and Bigelow on the occasion of the late reception given by Dr. Porter in their honor.

Dr. Barker's kindly social nature is constantly betraying itself in these happy touches: —

December 25, 1882.

Dear Doctor Porter, — When I wrote to you last week a conditional acceptance of the invitation to be present at the reception to be given by you to Dr. Oliver Wendell Holmes and Dr. Henry J. Bigelow, I indulged the delusive hope that I might have during the holidays a little "rest from my labors," and that by a short visit to Boston, I should be physically benefited and mentally and morally improved. But a new invasion of calls has quite convinced me that my hopes were illusive.

I particularly regret that it is not in my power to be present, because, on a review of my past life, I find that the two acts of mine which have received the warmest and most universal approval of the profession in this city were those by which I secured to the profession the opportunity of seeing and hearing those two gentlemen whom your guests meet to honor.

Several years since, Dr. Holmes came to this city, in response to an urgent call from the Faculty of Bellevue Hospital Medical College, and gave the valedictory address at the College Commencement, on which occasion the Academy of *Music* was crowded with an immense audience of our best people, and many hundreds were disappointed because they could not find even "standing room."

Last year, by persistent and pertinacious persuasion, I succeeded in inducing Dr. Bigelow to come here and give a lecture before the New York Academy of Medicine, which brought to the hall of the Academy not only all of our leading surgeons, but a mass of the general profession, who wished to hear one whose good work was so well known, and who had won such lau-

rels at the International Medical Congress in London.

My heart will be with you on the evening of the 28th of December, and if it be permitted to offer any toast on that occasion, allow me to propose the following: —

Dr. Oliver Wendell Holmes and Dr. Henry J. Bigelow. May the effects of the lead-poisoning with which the former was saturated in early life, be long-continued, to add to the happiness and wisdom of the world; and may the latter long labor to crush and wash away the fossils of error in medicine, and especially in surgery.

I beg that you will give to both of these gentlemen the assurance of my distinguished consideration and my warm regards.

I remain, very sincerely yours,

FORDYCE BARKER.

APPOINTMENT OF DR. OLIVER WENDELL HOLMES EMERITUS PROFESSOR OF ANATOMY IN HARVARD UNIVERSITY.

THE Committee of the Board of Overseers of Harvard University, to whom was referred the vote of the President and Fellows appointing Oliver Wendell Holmes, M. D., LL.D., Emeritus Professor of Anatomy, report that: —

For more than thirty-five years Dr. Holmes has filled the chair of Parkman Professor of Anatomy. Taking great interest in his classes, he has met them with conscientious punctuality and never-failing enthusiasm. By the ingenuity of his demonstrations, the vividness of his descriptions, the brilliancy of his imagination, and the ever ready resources of his varied erudition, he has given to the dry details of a difficult study a rare attraction; each lecture, prepared with exact fidelity, being delivered with all the freshness of a first occasion.

Earnest for the improvement of medical education, cautious as to important changes, he adopted and scrupulously carried out those which he was convinced would do most for the attainment of his great object, the best instruction of his pupils.

His services to the community have been valuable and constant. In societies, before boards of health and committees, he has exerted his eloquence in behalf of thorough medical education, measures of sanitary reform, charities, and public improvements. He has hastened the advance of rational medicine. He urged the practice of what is now technically called "surgical cleanliness" before Listerism was heard of. His writings add dignity to the profession of medicine, increase respect for the honorable and educated physician, and discourage the charlatan.

The retirement of a professor whose reputation has contributed so much to that of the university calls for an expression of profound regret, and for the fullest academic recognition of his long and zealous devotion to its interests.

The committee recommend that this Board concur in the vote of the President and Fellows.

Signed { R. M. HODGES. HENRY LEE. MORRILL WYMAN.

January 10, 1883.

REGULATION OF PLUMBING IN THE CITY OF BOSTON.

THERE is now under consideration by the city government of Boston an ordinance of especial significance, as showing the increased importance which is coming to be attached to sanitary science. It is in fourteen sections, and provides first for the registration of every person who carries on the business of plumbing; and that in all cases of new work or alteration of old work notice of what is to be done shall be filed with the Inspector of Buildings. The succeeding sections prescribe in detail rules for material, grade, and location of pipes, for traps, and fresh air inlets to all house-drains, and to each separate fixture, for extension of soil-pipes above the roof, and in general all the most recent precautions and safeguards which sanitary engineers are agreed upon. Finally, it directs that in every case the plumber shall notify the inspector when the work is sufficiently advanced for inspection, and before any of the pipes are concealed from view. That all new work shall be examined by the inspector with the peppermint test, and in case any imperfection is disclosed that the water shall be turned off from the building and not let on till the plumbing is pronounced satisfactory by the Inspector of Buildings.

For any violation of the provisions of the ordinance a fine of not less than twenty nor more than fifty dollars is imposed.

WRITER'S CRAMP.

A WRITER in the *London Medical Record* describes an invention of Professor von Nussbaum for the treatment of writer's cramp. The device was tested and found successful in a large number of cases obtained for the experiment by means of an advertisement of a "gratis cure." The apparatus depends upon the theory that whatever may be the cause of the affection, the normal antagonism of the muscles is pathologically altered, a spastic contraction of the flexors and adductors being always associated with weakness of the extensors and abductors. If, then, one could construct such a pen-holder as could be manipulated by the extensors and abductors instead of by the flexors and adductors, the cramp could not possibly occur, and thus the act of writing would prove the best means of curing a writer's cramp.

Acting upon this idea, Professor von Nussbaum constructed a kind of "bracelet" of gutta-percha, of an irregularly oval shape, and about three inches and a half in diameter, just wide enough to admit all the fingers. Thrusting the thumb and first three fingers into this bracelet, he found that strong extension of the inclosed fingers and abduction of the thumb were necessary to keep it fixed in its place. To the upper surface of the bracelet a pen-holder was attached by a screw, and adjusted so that the point of the pen should lie in a convenient position for writing when the hand was laid flat upon the table.

The more powerfully the movements of extension and abduction are employed, the more firmly will the bracelet be held, and, as a consequence, the better will be the writing. The form of the bracelet admits of variation, the object being to give employment as fully as possible to those muscles which, in the writer's cramp, remain weak and inactive, and thus to restore a normal antagonism between the two sets of muscles.

REPORTED MORTALITY FOR THE WEEK ENDING DECEMBER 30, 1882.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Typhoid Fever.	Small-Pox.
New York	1,206,590	581	206	15.28	21.76	5.78	1.36	—
Philadelphia	846,984	390	139	18.97	10.51	10.00	3.08	2.56
Brooklyn	566,689	266	106	17.29	21.44	8.27	—	.38
Chicago	503,304	214	75	21.96	14.49	5.61	4.67	1.87
Boston	362,535	176	58	20.69	17.73	10.87	1.14	—
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	239	93	45.19	6.68	10.46	1.26	29.71
Cincinnati	255,708	106	34	16.98	15.29	1.89	1.93	—
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	75	21	17.33	8.00	4.00	2.66	—
Pittsburg	156,381	73	25	36.99	4.11	9.59	16.44	—
Buffalo	155,137	65	23	36.91	7.69	10.76	3.08	—
Milwaukee	115,578	47	24	17.02	19.15	6.38	2.13	—
Providence	104,857	50	14	40.00	6.00	8.00	12.00	—
New Haven	62,882	30	6	10.00	23.33	—	3.33	—
Charleston	49,999	21	8	—	19.05	—	—	—
Nashville	43,461	18	4	5.55	11.11	—	—	5.55
Lowell	59,485	—	—	—	—	—	—	—
Worcester	58,295	35	15	17.14	8.57	5.71	5.71	—
Cambridge	52,740	15	6	20.00	6.66	13.33	6.66	—
Fall River	49,006	19	9	26.30	—	5.26	5.26	—
Lawrence	39,178	15	5	33.33	20.00	20.00	—	—
Lynn	38,284	17	4	5.88	5.88	—	—	—
Springfield	33,340	15	4	20.00	—	—	6.66	—
Salem	27,598	9	1	11.11	—	11.11	—	—
New Bedford	26,875	—	—	—	—	—	—	—
Somerville	24,985	14	7	14.28	21.42	14.28	—	—
Holyoke	21,851	—	—	—	—	—	—	—
Chelsea	21,785	—	—	—	—	—	—	—
Taunton	21,213	13	1	15.38	7.69	—	—	—
Gloucester	19,329	4	2	25.00	—	25.00	—	—
Haverhill	18,475	—	—	—	—	—	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	8	1	12.50	—	12.50	—	—
Newburyport	13,537	7	2	14.28	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	4	3	50.00	25.00	50.00	—	—
Nineteen Massachusetts towns	133,548	53	12	16.97	7.54	11.32	—	—

Deaths reported 2579 (no reports from St. Louis and New Orleans): under five years of age 908: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 549, lung diseases 386, consumption 357, diphtheria and croup 196, small-pox 87, typhoid fever 67, scarlet fever 62, diarrhœal diseases 42, whooping-cough 24, cerebro-spinal meningitis 18, malarial fevers 18, measles 15, erysipelas 15, puerperal fever 15. From *scarlet fever*, Brooklyn 14, Buffalo 11, Chicago nine, Philadelphia six, New York, Baltimore, and Cincinnati five each. From *diarrhœal diseases*, New York 14, Providence eight, Chicago four, Brooklyn three, District of Columbia, Buffalo, and Milwaukee two each, Boston, Baltimore, Cincinnati, New Haven, Fall River, Taunton, and Milford one each. From *whooping-cough*, New York eight, Pittsburg five, Cincinnati three, Philadelphia two, Brooklyn, Boston, Baltimore, District of Columbia, Fall River and Springfield one each. From *cerebro-spinal meningitis*, New York six, Boston, Worcester, and Lawrence two each, Philadelphia, Chicago, Fall River, Lynn, Springfield, and Taunton one each. From *malarial fevers*, New York nine, Brooklyn five, District of Columbia three, Baltimore one. From *measles*, New York seven, Philadelphia, Cincinnati, and Buffalo two each, Boston and Providence one each. From *erysipelas*, Boston four, Chicago three, New York and Cincinnati two each, Pittsburg, Milwaukee, Providence, and Peabody one each. From *puerperal fever*, Chicago four, Boston three, Philadelphia two, New York, Baltimore, Pittsburg, Milwaukee, New Haven, and Newburyport one each.

Three hundred and one cases of small-pox were reported in Baltimore, Cincinnati seven, Brooklyn two; diphtheria 66, scarlet fever 16, and typhoid fever eight, in Boston; scarlet fever 12, diphtheria three, in Milwaukee.

In 33 cities and towns of Massachusetts, with a population of 899,213 (population of the State 1,783,086), the total death-rate for the week was 23.36 against 20.75 and 20.78, for the previous two weeks.

For the week ending December 9th, in 170 German cities and towns, with an estimated population of 8,443,620, the death-rate was 23.7. Deaths reported 3848: under five years of age 1694; consumption 327, lung diseases 249, diphtheria and croup 248, diarrhœal diseases 110, scarlet fever 84, measles and rötheln 58, typhoid fever 58, whooping-cough 47. The death-rates ranged from 14.1 in Wiesbaden to 35.3 in Braunschweig; Königsberg 29.1; Breslau 24; Munich 26.9; Dresden 29.6; Berlin 20.9; Leipzig 18.7; Hamburg 22.6; Cologne 24.4; Frankfort a. M. 17.8; Strasburg 21.4.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending December 16th, the death-rate was 26.9. Deaths reported 4370: acute diseases of the respiratory organs (London) 637, measles 134, scarlet fever 95, whooping-cough 85, fever 79, diarrhœa 46, diphtheria 23, small-pox (Newcastle three, Birmingham, Oldham, and Sheffield one each) six. The death-rates ranged from 18.9 in Bristol to 37.7 in Halifax; Birkenhead 20.5; Birmingham 23.8; Sheffield 24.1; Newcastle-on-Tyne 26.2; Sunderland 27.6; Nottingham 29.1; Liverpool 34; Preston 35.3. In Edinburgh 25.6; Glasgow 35.5; Dublin 33.6.

For the week ending December 16th, in the Swiss towns, population 494,390, there were 40 deaths from consumption, acute diseases of the respiratory organs, 23, diarrhœal diseases 12, diphtheria and croup six, typhoid fever five, scarlet fever three, puerperal fever three, whooping-cough one. The death-rates were, at Geneva 15.4; Zurich 17.3; Basle 19.6; Berne 23.

The meteorological record for the week ending December 23d in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
December, 1882.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 24	29.816	37	42	34	89	73	79	80	W	W	W	6	9	10	O	O	C	—	—
Mon., 25	30.178	38	43	33	73	57	79	70	W	NW	W	10	14	6	F	C	F	—	—
Tues., 26	30.147	33	40	32	78	75	100	84	NW	SE	W	6	4	6	O	O	S	—	—
Wed., 27	30.090	34	40	28	78	67	68	71	NW	NW	NW	10	11	14	C	F	O	—	—
Thurs., 28	30.198	29	34	22	67	54	64	62	NW	NW	NW	10	12	10	F	O	F	—	—
Fri., 29	30.264	29	38	21	61	53	82	65	W	W	SW	4	9	8	C	C	C	—	—
Sat., 30	30.108	33	39	27	64	63	69	65	W	NW	NW	6	9	7	F	O	O	—	—
Means, the week.	30.114	33						71										—	—

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

A PRIZE ON THE PREVENTION OF BLINDNESS.

THE Fifth International Congress of Hygiene, which will meet at The Hague, Holland, in 1884, will award the prize of two thousand francs offered by the London Society for the Prevention of Blindness to the author of the best essay written in English, French, German, or Italian on The Causes of Blindness and the Practical Means for Preventing It. Besides this prize the International Society for the Improvement of the Condition of the Blind reserves to itself the right to award a second prize of one thousand francs or two prizes of five hundred francs each and a silver gilt medal with a diploma, should it see fit, to such of the essays as should, in the opinion of the international jury for the principal prize, be deserving of it; the last-mentioned prizes will be distributed at the centenary festival of the first blind institution founded by Hauy, which will take place in Paris in 1884.

The Fourth International Congress of Hygiene, which met at Geneva in September, 1882, adopted for this competition the following programme, as prepared by the London Society for the Prevention of Blindness: —

I. The Study of the Causes of Blindness: (*a.*) Hereditary causes. Diseases of parents, consanguineous intermarriages. (*b.*) Infantile eye diseases. Various inflammations of the eyes. (*c.*) School period and time of apprenticeship, progressive short-sightedness, etc. (*d.*) General diseases, diatheses, various fevers, chronic poisoning, etc. (*e.*) Trade influences, wounds, and accidents, etc., sympathetic ophthalmia. (*f.*) Social and climacteric influences, contagious ophthalmias, unhealthy habitations, defective lighting, etc. (*g.*) Neglect of treatment and bad treatment of eye affections.

II. The Study of Practical Preventive Means: (*a.*) Legislative means. (*b.*) Hygienic and professional means. (*c.*) Educational means. (*d.*) Medical and philanthropic means.

The International Jury, elected by the Geneva Congress, for the purpose of judging the essays, consists of: —

Dr. Snellen, professor of ophthalmology, Utrecht.

Dr. H. Cohn, professor of ophthalmology, Breslau; Dr. Berlin, professor of ophthalmology, Stuttgart.

Dr. Fieuzal, physician to the Hospice des Quinze-Vingts, Paris; Dr. Layet, professor of hygiene, Bordeaux; Dr. Coursserant, oculist, Paris.

Dr. Reymond, professor of ophthalmology, Turin.

Dr. Sormani, professor of hygiene, Pavia.

Mr. Streatfield, professor of ophthalmology, University College, London; Dr. Roth, honorary secretary and treasurer (*pro tem.*) of the Society for the Prevention of Blindness, London.

Dr. Dufour, of the Ophthalmic Hospital, Lausanne.

Dr. Haltenhoff, lecturer on ophthalmology, Geneva, and secretary to the jury.

Those essays to which prizes shall be awarded shall become the property of the Society for the Prevention of Blindness and of the International Society for the Amelioration of the Condition of the Blind, who will be at liberty to publish them in whole or in part in several languages, in order to make them useful in the way they consider best. Manuscripts for competition are to be sent to the secretary not later than March 31, 1884, every manuscript to be distinguished by a motto, which is also to be written on a sealed envelope containing the name, Christian name, titles, and address of the author. The envelopes will not be opened until after the award of the jury.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM DECEMBER 29, 1882, TO JANUARY 5, 1883.

MCKEE, J. C., surgeon. To report on or before January 1, 1883, to the commanding officer, Fort Winfield Scott, Cal., for assignment to duty as post surgeon. Paragraph 1, S. O. 197, Department of California, December 28, 1882.

GORGAS, W. C., assistant surgeon. Relieved from the temporary duty to which assigned under paragraph 4, S. O. 137, Department of Texas, and will report to the commanding officer, Fort Brown, Texas. Paragraph 2, S. O. 140, Department of Texas, December 26, 1882.

HOPKINS, WILLIAM E., assistant surgeon. Granted leave of absence for two months, to commence January 1, 1883, with permission to apply for an extension of two months. Paragraph 1, S. O. 88, Military Division of the Atlantic, December 28, 1882.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FOR THE WEEK ENDING JANUARY 6, 1883.

HENRY B. TIBBS, assistant surgeon. Ordered to the U. S. S. Jamestown.

CORRECTION. — Nathaniel G. Kierle, M. D., is Lecturer on Pathology, College of Physicians and Surgeons, Baltimore, and not in the University of Maryland, as reported in the article on New Lenox Malaria Case in our issue of December 28.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the Society will be held at the Medical Library, No. 19 Boylston Place, on Monday, January 15, 1883, at eight o'clock P. M. Reader, Dr. G. K. Sabine. Subject, A Case of Caries of the Ribs, with Abscess of the Chest. Dr. W. J. Otis will read A Case of Exfoliation of the Mucous Membrane of the Bladder from Cystitis following Confinement.

C. M. JONES, *Secretary.*

SUFFOLK DISTRICT MEDICAL SOCIETY. SECTION FOR OBSTETRICS AND GYNÆCOLOGY. — There will be a meeting of the Section at 19 Boylston Place, on Wednesday, January 17th, at eight P. M. Regular paper by Dr. W. A. Dunn. Subject, Results in Five Hundred Labor Cases.

J. B. SWIFT, *Secretary.*

OFFICERS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT FOR 1883. — At the annual meeting of the Boston Society for Medical Improvement, held January 8th, Charles D. Homans, M. D., was elected President, and Edward M. Buckingham, M. D., Secretary, for the ensuing year.

APPOINTMENT. — Dr. O. G. Cilley has been appointed by the Governor Surgeon-General of Massachusetts.

Lectures.

CLINICAL LECTURE.[1]

BY DAVID W. CHEEVER, M. D.,
Professor of Surgery, Harvard University.

I. CELLULAR ABSCESS.

GENTLEMEN, — The first case which I bring before you to-day is that of this little girl, who came here a week ago with a hard bunch upon her left wrist. This bunch has now softened. It gives rise to great apparent deformity and protrusion of the ulna, which appearance, however, is deceptive. The wrist-joint moves freely in all directions, without pain. There is a sac containing pus, which I proceed to incise. If the pus is due to caries, the disease at all events does not affect the joint, and it is doubtless merely an inflammation of the cellular tissue.

II. PUNCTURED WOUND OF HAND; LIGATURE OF THE BRACHIAL ARTERY.

This little boy, about six years of age, nearly three weeks ago drove a penknife into his hand, in the neighborhood of the first carpo-metacarpal articulation. The immediate hæmorrhage was slight. One week after the injury, however, profuse secondary hæmorrhage occurred. The physicians in attendance prolonged the original incision from the *tabatière* toward the seat of the radial artery in the wrist, and made an attempt to secure the bleeding vessel, but without success. A firm compress was then applied to the hand, and the boy was sent from his home, two hundred miles distant, to Boston, where he arrived exhausted and pale from the amount of blood that had been lost. On taking off the twist from the hand I found a foul suppurating cavity at the site of the incision; also a superficial slough on the ulnar side of the hand, due to pressure of the bandage. No blood appeared from the vessel, but there was reason, in view of the bad condition of the parts, to suppose that hæmorrhage would recur. I therefore ligatured the brachial artery. The operation was performed under the spray, and Lister dressings were applied. This was eleven days ago. While there has not been absolutely first intention, the wound has practically healed, as you see, the granulations having come up to the level of the skin. The ligature, which was of catgut, never came away, and there is reason to believe that it has been absorbed. There is no further danger, now, of secondary hæmorrhage, and the child can go to his home in a few days.

There are two points worthy of attention in this case. First, the safety of tying the brachial, so far as concerns danger of mortification of the hand, and its advantages as serving to secure the interosseous arteries. By applying the ligature to this vessel, we also avoid the neighborhood of the sloughing tissues about the wound. Secondly, the prompt establishment of the collateral circulation. On the eighth day after the operation I detected pulsation in the ulnar artery, and on the ninth it was observed in the radial. It is now perfectly restored in both. In this case the nails have retained their bright pink color throughout, and the hand has been warm.

III. ULCER OF THE UPPER LIP.

This man, as you will observe, has upon his upper lip an ulcer, with ragged, hard edges. It has been there for six or seven months. He has also had for the past three months venereal sores upon his privates, which have not healed yet. These sores, however, seem to be antedated by that upon the lip. The question in this case is whether the man has a primary specific sore upon the lip, or whether the ulcer is a degenerating epithelial growth. The patient himself ascribes the sore to irritation from a pipe, aggravated by neglect. I can detect no enlarged glands in the neck, and there appears to be no soreness on either side.

It is important to decide on the nature of this sore within a few weeks for the sake of the treatment. The man says he has taken no medicine. We will therefore put him at once upon a course of mercurials, and follow it up vigorously for three or four weeks, either alone or in connection with the iodide. If by that time the sore has not begun to heal, it should be excised.

IV. ACUTE SYNOVITIS OF THE WRIST.

This lad is in the employ of a tailor. He tells me that he is not called upon to do heavy lifting or other work which would be likely to strain his wrist. He had previously been in good health, when suddenly, six days ago, he was taken with pain in the wrist, without having had any injury. Stiffness, swelling, and deformity came on at once, preventing the use of the hand. The hand appears pushed over to the radial side. The swelling is confined to the ulnar side, and there is great tenderness through the ulnar articulation. He tells me that this is the only point affected, and that he never has had rheumatism. The localization of the trouble makes it look like acute synovitis, which, in the absence of any strain or injury, may be of rheumatic origin. As to the treatment, we will begin with the theory of rheumatism. The hand should be placed on a splint; we will give him colchicum internally, and locally lotions of laudanum and camphor, to be followed later by iodine. If the disease is rheumatism it will probably be relieved by this treatment. If synovitis it will assume an indolent type, and continue a long time.

V. COMPLETE CONGENITAL EXTROVERSION OF THE BLADDER.

While the next patient is being etherized I will say a few words about the case, and will then demonstrate the pathological condition, and afterwards perform the operation in your presence. It is a girl, six years of age. She presents a defect of the fœtal development. The anterior abdominal walls have never completely closed along the median line of the body. There is no umbilicus. The recti muscles separate at a point above where the umbilicus should be, and spread out at an angle, till they become attached to the pubes at quite a distance one from the other. The pelvic bones themselves are separated by a wide interval. The anterior wall of the bladder is absent, and the posterior surface of the mucous membrane is presented to view with the ureters discharging upon it. The interior of the bladder is thus exposed to the air. When the patient is at rest the exposed surface is comparatively flat, but when she coughs, vomits, or strains, it rises up and is pushed forward, in shape and size like a billiard ball; it then bleeds readily, and, as you can imagine, is much irritated by the clothing. There is no urethra, clitoris, or nymphæ. The labia majora lie to the sides by the separated pubic arch. There is a rudimentary

[1] Specially reported for the JOURNAL.

vagina, which, as has been noted in other similar cases, lies transversely. The probe enters the vagina an inch and a quarter, and sweeps on either side into a pouch, which is the analogue of the Douglas' cul-de-sac in the normal female. The finger introduced into the rectum discovers a small ovoid body, which is probably the rudimentary uterus. The rectum itself appears to be normal.

This is, then, a case of complete exstrophy of the bladder, a disease rare in itself, and especially uncommon in this sex. Of forty recorded cases only seven occurred in females. The inconveniences of the condition are obvious. The child is kept always wet by the trickling urine; excoriation of the skin follows. The tumor is exposed to a constant friction. The mouths of the ureters being constantly irritated, may become blocked by a phosphatic deposit, which is a source of danger. Yet the condition is not inconsistent with life. This child is likely to grow up. Instances have been recorded in which persons thus afflicted have reached the age of seventy or eighty years.

From separation of the recti, and general weakening of the abdominal walls, we find that this deformity often gives rise in males to double inguinal hernia. In this child the rings are elongated, narrow slits, against which the intestine can be felt on cough, but into which it does not enter. The child is, therefore, thus far free from hernia; moreover, her digestion and other functions are good, and she may be considered healthy.

Now, on uncovering the parts, you will see that at a point a little below where the umbilicus should be, there is a crescentic line, where the transversalis fascia ends. Below this the tissues are soft, consisting only of the skin and peritonæum over the intestine. Below this is the convex surface of the tumor, presenting a groove with two lateral lobes, and in shape looking not unlike the conventionalized "heart" depicted on playing cards. This is the trigone, and on the edge are the two ureters, which admit, as you see, a fine probe, and are constantly oozing with urine. You see the rudimentary labia, and the absence of the nymphæ. This transverse slit, looking like the meatus, is in reality the ostium vaginæ. Below, the perinæum and raphé are normal. The excoriations about the anus, looking like condylomata, are due simply to the irritation of the urine. The fullness which you see over the separated pubic bones is due chiefly to fat, and in the male often contains a double inguinal hernia. But here, as I have said, the ring is empty. My finger and thumb are on the spines of the pubes, which by measure are nearly three inches apart. Above the bladder the angle formed by the receding recti can be readily seen. The existence of the urachus is denied in these cases. The umbilical cord is attached about at the upper edge of the bladder, and here the umbilical vessels terminate. The deformity is due in these cases to a failure of the anterior layer of the allantois to close. The smallest degree of the same abnormality is seen in the condition known as epispadias. A few years ago there was a man who earned his living by going about the country and exhibiting his extroverted bladder before the various medical classes.

The treatment of this deformity may be mechanical or operative. In the former case a urinal is arranged with a metal cup communicating with a reservoir hanging along the thigh. This is hard to adjust and keep in place, and would be especially so in a child of this age. Operative measures may be divided into two classes, radical and plastic. The former attempts to direct the ureters into the rectum, thus making the lower pouch of the rectum into a bladder, which is to be controlled by the sphincter ani, and which will expel the urine as is necessary, either with or without the fæces. This has often been attempted, and several operations for this purpose have been described. All that I have seen, with one exception, have been disastrous. The patient has usually died either from cellulitis or peritonitis. In those that have survived the result has not been successful. The difficulty is that the peritonæum is displaced like all the other viscera, and one cannot tell how low it comes down. Normally it should go no lower than the line of the trigone. In two cases operated upon in London the peritonæum was perforated, and there was intra-peritoneal extravasation of urine. Another difficulty is that even if the operation is primarily successful the ureters may become blocked up by a phosphatic deposit. To perform this operation it is necessary to pass a fine probe into the ureter; the finger is introduced into the rectum. Then two needles are passed from the rectum, and the lower half inch of the ureter is held in the loop of thread. This is then tightened, and the ureter sloughs through into the rectum by an elongated opening.

T. Holmes' method is to slough the whole back wall of the vesical trigone into the rectum by means of a clamp, thus getting a large fistulous opening.

These operations are all open to the objection of being dangerous, and it is uncertain whether the rectum will tolerate the phosphatic deposits, and whether the sphincter will hold well.

The second class of operations are the plastic ones, where the object is to cover in the deformity by flaps of skin. We cannot hope to make a bladder which will hold water, but we cover it with skin in the expectation that the cicatrix will hold back the bladder, and will leave only an exposed point at the base where the ureters will discharge, and to which a urinal can be more accurately fitted.

T. Holmes' mode of operating is to take one square flap from the groin, and reflect it over the bladder, raw side uppermost. A second flap is cut obliquely from the other groin and labium or scrotum, and turned or slid over the first, raw surface downwards. A subsequent operation is required to unite the upper edges of these flaps to the wall of the abdomen, above the bladder.

John Wood's operation consists in raising an apron of skin from above the bladder, and turning it down so that the raw surface comes uppermost. Over this are brought two smaller lateral flaps with their raw surfaces downwards; these are joined along the median line, and all are stitched into the margins of the sound skin around the bladder.

Bigelow has grafted the skin directly upon the bladder by dissecting off the mucous membrane above the trigone, raising two flaps at the sides, and applying them with the raw surface downward to adhere directly to the bladder, thus occluding the upper three fourths of the viscus.

The operation which I shall do is that of Wood. The essential point is to have no tension, and thus to avoid sloughs. Cleanliness is also especially important. I take the flap from above, about to where the umbilicus should be. The side flaps I make from the groins

rather than from the sides of the abdomen, as Wood does, as by his method almost the whole belly is flayed. You will observe that the side flaps taken from the groin infringe upon the erectile tissue about the vulva, and thus give rise to considerable hæmorrhage.

[After this had ceased the flaps were brought into excellent apposition, and stitched with wire and catgut. The protrusion of the bladder was entirely closed in except a small opening below. The skin of the belly was drawn together with two button sutures, and the raw surface over the abdomen two thirds closed. The wound was dressed with lint and carbolized oil, one to forty parts.]

Original Articles.

ORBITAL CELLULITIS AS A SEQUEL OF FACIAL ERYSIPELAS.[1]

BY HENRY W. WILLIAMS, A. M., M. D.,
Professor of Ophthalmology in Harvard University.

THE importance of an early recognition of secondary inflammation of the cellular tissue of the orbit occurring as a consequence of facial erysipelas; the peculiar conditions often existing in and about the eyelids at the time of its development, which render its diagnosis more difficult; and the grave results which may attend it, make this somewhat rare affection one of much interest to the general practitioner.

After more or less complete convalescence from an attack of facial erysipelas, which has generally been of some severity, and usually attended with the formation of abscesses of the eyelids, the scalp, or the deep-seated cellular tissues of the face, the patient begins to complain of a sensation of fullness and of dull pain, which is sometimes intermittent, in or around the orbit. This is followed by lividity, swelling, and immobility of the lids, and by limitation of movement and gradually increasing protrusion of the eyeball. The pain is increased if the globe is pressed upon, but is not excited by pressure along the orbital margin. The exophthalmos is oftenest in a direction directly forwards; but the eye may be laterally displaced, or the axis of the globe deviated in any direction, in which case the patient perhaps complains of double vision. This protrusion and fixedness of the globe is an important diagnostic sign. When it is large in amount the lids are often crowded apart to such an extent as to expose the cornea and render it liable to ulceration. These conditions are accompanied by more or less conjunctivitis, with increased mucous secretion, and generally by chemosis of the subconjunctival cellular tissue, which is usually most considerable at the lower part of the globe. Rigors are sometimes experienced. As will be seen from the appended report of cases, fluctuation can rarely be detected at the early and most important stage of the disease, because, even when suppuration has already begun, it is very deeply seated, and the interposition of the elastic eyeball and Tenon's capsule between the purulent nidus and the surgeon's finger prevents an accurate estimate of the condition of the underlying tissues. Moreover, the thickened or scarred state of the eyelids, which often have been themselves the seat of abscesses during the acute period of the erysipelas, increases the difficulties of manipulative exploration.

[1] Read before the Boston Society for Medical Improvement, January 8, 1883.

Resolution of the inflammatory changes in the tissues may exceptionally occur, with or without treatment, as will appear from one of the cases reported; but this is so far improbable that, having in view the possible and in fact the ordinary course of the disease, we are usually not justified in either an expectant treatment, or in reliance on cold or emollient local applications, or leeches, or in delaying surgical intervention in the hope that spontaneous evacuation of an abscess may bring relief. This last is the probable eventual result of non-interference; but in the mean time numerous dangers are incurred: vision may be lost, without other serious changes; the cornea may be destroyed by ulceration occasioned by exposure or by increased tension; the inflammation may extend to the interior of the eyeball, causing suppurative ophthalmitis or destructive changes in the retina, the choroid, or the uveal tract; the orbital suppuration may make such extensive ravages in the fatty and cellular tissues that after recovery the globe will sink back in its socket, or its movements become limited by rigidity or adhesions of its muscles; the accumulated pus may make its way through the thin bony walls into the nose or the antrum; or, last and most serious of all, there is great danger to life, either from infiltration of pus into the cranial cavity through the superior orbital foramen, or from extension of the inflammation, by contiguity, to the meninges of the brain; or from the formation of intra-cranial thrombus or pyæmic deposits through the medium of the ophthalmic veins. That these last dangers are not imaginary is shown by the report of a number of cases lately collected by Weber, of which four fifths resulted fatally.

The ophthalmoscopic appearances observed are not usually those of neuritis. In one of my own cases, where sudden loss of vision led to an immediate examination of the condition of the fundus of the eye and the optic nerve, the ophthalmoscope disclosed only a lessened calibre of the retinal vessels and a resulting somewhat anæmic aspect and appearance of infiltration of the retina, without other obvious changes of the optic disk or of the fundus oculi. Subsequently a still further diminution of size occurred in the retinal vessels, and the optic disk exhibited some semblance of atrophic change, though this was less marked than in ordinary atrophy resulting from neuritis. Similar appearances to those last described were found in the other eyes where vision was lost; but in these I had no opportunity to make an ophthalmoscopic exploration directly after the loss of sight. In some cases where vision was preserved, circumstances made ophthalmoscopic examination impossible until after relief of the acute symptoms by evacuation of the abscess. The so frequently resulting amaurosis is attributed by some authors to neuritis, or to compression of the optic nerve itself; but the fact of the very sudden blindness, with the absence of marked changes of the optic disc, seems rather to indicate compression of the retinal vessels by the inflamed and indurated tissue which surrounds them, during their course through the deeper parts of the orbit and before they perforate the optic nerve to pass towards the eyeball. Lessening of the acuteness of vision may occur without its complete abolition, and should be regarded as an urgent reason for prompt surgical action, so as, if possible, to prevent permanent blindness.

Post-erysipelatous inflammation of the orbit perhaps arises from extension of the morbid processes, by con-

tiguity, from the facial tissues, or may be due to metastasis. Taking into account the previous history, which affords important information, the disease may usually be readily distinguished from other affections of the orbit. Cellulitis resulting from periostitis or from caries of the orbital parietes is less acute in its development, and the seat of inflammation can often be distinctly localized. Tumors of the orbit, or the exophthalmos of Basedow's or Graves's disease, frequently cause much displacement or protrusion of the eyeball, but seldom give rise to acute inflammatory processes. Pulsating tumors have special features which generally afford means of easy diagnosis. Emphysema, hæmorrhagic infiltration, or other results of accident, can be explained from knowledge of the exciting cause. Inflammation of the lachrymal gland is of exceeding rarity, is indicated by local tenderness, and generally occasions lateral displacement rather than great protrusion of the eyeball. Similar symptoms to those we have described are met with in cases of inflammation of Tenon's capsule, but the pain at the outset is there more violent. Cellulitis of other origin than already mentioned is very rare, except sometimes in a milder form in children, which usually has a favorable termination.

One instance is reported where, in a case which had been long neglected, and both the eyeball and surrounding tissues were protruded far beyond the orbital cavity and had become livid, a distinguished practitioner who saw the patient in consultation, not being allowed to make an exploratory puncture, found it difficult to decide whether the condition arose from orbital abscess or a malignant growth. The mystery was soon after explained by the bursting of an abscess, with immediate relief of the symptoms.

Early puncture is the only suitable treatment. It is not only harmless, but, if done before the formation of pus has begun, it may prevent suppuration by relieving the engorgement of the parts. Should matter not be discovered at one point other deep punctures should be made. If no accumulation is then detected we thus at least relieve the congestion and lessen the tension and the pain, and perhaps obviate the danger of grave lesions of structure or function. Furthermore, by a partial division of Tenon's capsule we open an outlet for the more ready escape of pus should it be subsequently formed. If relief is not obtained and the indications continue, renewed exploration is to be made on the next or on subsequent days. In doing this operation Graefe's cataract knife, or a narrow bistoury, is to be passed either through the conjunctiva or through the skin of the lids, at such place, if any, as from the displacement of the globe or otherwise appears to be designated as the situation of an abscess. Most frequently, the lower border of the orbit, near the inner or the outer canthus, is the place of election for the puncture. From these points the knife should be passed backwards between the recti muscles. But if there seems reason for believing that the abscess may thus be more easily reached, any other part of the orbital border may be selected, as with a very narrow knife and proper caution there is no chance of harm being done. The back of the knife should be towards the eyeball, and its point should be kept near the orbital walls, so as to avoid any possible injury of the globe, while care must also be taken not to give it such a direction, or so much force, as to penetrate through the thin bony plate at the roof or the inner side of the orbit. When there is much external swelling the abscess is sometimes found at a depth of two inches or more, and even then perhaps only after three or four punctures have been made without result. Should pus be discovered the external opening is to be sufficiently enlarged to admit of its free discharge; and, to prevent closure or obstruction of this outlet from the deep-seated cavity, a very narrow tent cut from a bit of cambric or a fine drainage tube should be introduced, and renewed until the discharge lessens or ceases. No pressure is required to evacuate the pus, for the existing tension of the parts suffices to insure steady retraction and a constant expulsion of the fluid. Warm fomentations are now often useful as well as grateful to the patient. Speedy recovery ensues, except where too long delay has induced periostitis and caries. Until within about two years I had never seen a case of orbital cellulitis consequent on erysipelas, but the fact that I have met with four cases of this character within seven months of the present year proves the importance of a recognition of these secondary conditions by those in whose hands nearly all patients thus attacked must necessarily remain for treatment. For purposes of comparison brief abstracts of cases, varying considerably in their phenomena and results, are appended.

CASE I. In the spring of 1880 I was asked to attend in consultation a gentleman about sixty years of age suffering from a somewhat severe attack of erysipelas, affecting the neck, scalp, forehead, eyelids, and face. Two abscesses of some size formed in the upper and one in the lower lid of the left eye, and one in the deep cellular tissue of the face near the left ala nasi. These having been freely opened, the infiltration of the lids and the conjunctival chemosis rapidly lessened, and all appeared to be going on well. Vision of the left eye was daily tested, and was apparently normal. But after two weeks of such steady improvement that the lids could be opened, and the whole aspect of the patient promised a speedy recovery, a rather sudden increase of chemosis was observed beneath the conjunctiva of the globe, towards both the canthi, together with a diminished power of rotation and a slight protrusion of the eye. The patient complained of a sensation of fullness without much pain at the temporal side of the orbit. Suddenly nearly all perception of light was lost in this eye. Examination with the ophthalmoscope showed a faint yellowish-gray aspect of the whole fundus, as if from a slight infiltration, without turgescence or other change of the optic disk, and a little diminution of calibre of the retinal vessels.

Although no fluctuation was discoverable, and the indications were indistinctly marked, it was believed that an abscess must be in process of formation at the bottom of the orbit, and exploratory puncture was advised. This being assented to ether was administered, and two very deep punctures were made with Graefe's narrow knife in the region most complained of by the patient, and where the position of the displaced globe seemed to indicate that pus might be found. Only blood escaped, and further operative search was deemed undesirable. On the following day, the symptoms persisting, a second attempt to find a purulent deposit was thought indispensable, and, after three insertions of the knife to the depth of two and a half inches from the swollen external surface, a slight flow of pus was obtained from an opening through the lower lid

and along the floor of the orbit. A thin tent was introduced, and a gradually lessening discharge continued for three or four days, after which recovery was rapid. Very little loss of substance occurred in the orbital cellular tissues, and the normal appearance and movements of the eye were preserved. Loss of vision remained complete. The grayish-yellow aspect of the fundus gradually disappeared, and the only noticeable ultimate changes consisted in a diminished size of the retinal vessels, without the marked blanched and shrunken aspect of the optic disk which is visible in ordinary instances of atrophy of the nerve.

Case II. Mr. G., aged twenty-six, entered my service at the City Hospital April 12, 1882. The history obtained from his physician was as follows: Twenty-five days previously, erysipelas, accompanied by some delirium, had begun in the left cheek, and extended so as to involve the entire scalp, face, and neck, closing the lids of both eyes. There was severe headache, but not much pain in either eye, and no tenderness on pressure. He complained more of the right than of the left eye. When the lids were opened, eighteen days after the attack, the conjunctiva was much congested and the globe was observed to be slightly protruded. The congestion had lessened previous to his admission to the hospital; but there was chemosis towards the inner angle, œdema of the lids, and some protrusion and loss of motility of the eyeball. Slight tenderness on pressure and a little fullness of the upper lid above the inner canthus were also observed. Vision good. A puncture was made at the point of fullness; the narrow knife being passed in to the depth of two and a half inches, and matter, mingled with blood, was discharged. A small tent being inserted, there was free escape of pus during the afternoon and the next day. Late in the afternoon of this day, the eye, which as well as the head had been relieved after the operation, began again to pain him.

On the 14th there had been a free discharge of pus from the wound during the night, but the œdema and tension of the lids was not materially diminished. Another puncture to a depth of two inches was made through the lower lid and along the floor of the orbit, which was followed by a flow of pus. This opening was kept free by the insertion of a tent or by passing a probe, and the discharge continued until May 7th, when it ceased. The movements of the eyeball and vision were normal when he left the hospital, on the 10th of May.

Case III. J. R., aged six, was seen in consultation out of town, July 3, 1882. Two weeks previously he had erysipelas of the face, eyelids, and forehead; but the symptoms subsided, and his physician reports that on the 1st of July both eyes were open and vision good.

When seen, there was no apparent trace of erysipelas. The lids, especially the lower lid of right eye, were much swollen and slightly livid, and as they could not be opened without an elevator, ether was administered to allow of a painless and sufficient examination. The eyeball was then found to be greatly protruded and immovable, and there was much chemosis beneath the conjunctiva covering the lower half of the globe. Cornea clear. I learned that the little fellow had complained of much pain, and said that things looked red with this eye.

The diagnosis of deep-seated orbital abscess seemed to be unquestionable, and with the consent of his physician I introduced Graefe's narrow knife at the inner third of the orbital margin and along its floor, to the depth of two and a quarter inches. Pus followed this puncture, and the external opening being then enlarged, a copious flow of thick matter ensued. A thin muslin tent was pushed into the cavity, and left *in situ* to secure a free outlet, and light poultices were ordered.

I again saw the little fellow on September 14th. Vision was perfect, and only a small scar remained to denote the point of puncture.

Case IV. A man, aged sixty-four, was seen at the City Hospital, in consultation with Dr. Cheever, who kindly allows me to refer to the case, on November 17, 1882. When admitted, November 5th, his face was swollen and eyes closed, and abscesses had already formed in the right eyelids, from erysipelatous inflammation, following a fall occurring some ten days previously. Abscesses were opened in both lids two days after admission, at which time there was much subconjunctival chemosis. On the 12th a small abscess was observed and opened on the cheek, near the outer canthus of the lids. The following day patient could open both eyes, but it was found that he could not see with the right eye. When examined on the 17th he had no perception of light, the optic nerve seemed slightly altered, and retinal vessels lessened in size; there was marked protrusion of the globe, with chemosis, and with steady pain in the eye. Two punctures reaching the bottom of the orbit were made by Dr. Cheever through the upper and one through the lower lid, near the canthi; but no pus followed; only a considerable flow of blood taking place. Relief of pain ensued; but the protrusion, three days afterward, remained nearly the same. December 4th swelling was almost gone, though the conjunctiva was red and puffy, and there was still some prominence of the eyeball. Ophthalmoscopic appearances as before reported. Patient discharged. In this instance the relief of congestion afforded by puncture doubtless averted the process of suppuration; but the pressure of the inflamed cellular tissue upon the retinal vessels had extinguished vision.

Case V. August 29, 1882. I saw in consultation in a distant city a gentleman somewhat advanced in years, in whose orbit similar symptoms and conditions to those I have described, together with loss of vision, had ensued after convalescence from a severe carbuncle upon the neck. Punctures as far as to the bottom of the orbit were made, without finding pus, but with considerable improvement in the local and in the somewhat threatening cerebral symptoms. At a second visit, September 8th, I found the chemosis, protrusion and fixedness of the globe, and the pain continuing. Pneumonic râles were heard over a considerable extent of one lung, and the patient's general condition appeared serious. Deep punctures were again made near the inner and outer canthi without discovering an abscess. Staying for another visit a few hours later, I found that pus had made its way through a small opening in the conjunctiva, between the insertions of the internal and inferior recti. This was enlarged, and a free discharge took place for several days, followed by rapid improvement. The pneumonic râles and fever had disappeared on the 17th.

Some opacity of the cornea and slight shrinking of the globe are reported by his physician as having ensued.

RECENT PROGRESS IN GYNÆCOLOGY.

BY F H. DAVENPORT, M. D.

PERMANENT CURE OF BACKWARD DISPLACEMENTS OF THE UTERUS.

LOHLEIN [1] speaks of the varying views of gynæcologists on this point, some claiming permanent cure in from half to one year, others regarding it a necessity for pessaries to be worn as permanently as trusses. To add to the few observations on this point, the author has selected cases from his own private and policlinic practice. He has excluded all cases complicated by adhesions, all where a too shallow vaginal cul-de-sac or the presence of tumors prevented the complete reposition of the organ, and has included only those in which the uterus was kept in its normal position at least six months, the average being over a year. Only those were considered cured which, on repeated examinations, and at a considerable time after the removal of the instrument, were found to have kept the true position. In accordance with these principles the cases were reduced to fifty-six, of which only four were cured "in the anatomical sense," and fifteen considerably improved.

The influence of pregnancy, and careful attention after confinement in effecting a cure, has, according to Lohlein, been over-estimated. The supposition that the puerperal involution would give to the relaxed utero-sacral ligaments their original tone is not justified by the facts. Lohlein has, in fifteen patients with twenty-one intercurrent confinements, in spite of ergot, douches, and early application of pessaries, effected a permanent cure only twice.

TOTAL EXTIRPATION OF THE UTERUS AND ONE KIDNEY.

Von Stark [2] relates the case of a woman, forty-two years of age, who was the subject of a carcinoma of the cervix uteri, which had also involved the right side of the vagina. He operated for the total removal of the uterus. The operation was difficult, and the right ureter could not be separated from the diseased parts, and finally was cut through. A drainage tube, size of the finger, was left in the wound. Until the third day the patient's condition was good, when fever set in, with pain in the right kidney and escape of urine from the vagina. The wound, which had closed, was reopened and washed out, whereupon the fever subsided. On the sixth day after this the right kidney was extirpated after the method of Simon. There was healing by first intention. Three months later there had been no return of the disease.

SPECIFIC VULVO-VAGINITIS IN CHILDREN AND ITS TREATMENT.

Dr. Richard Pott [3] finds vulvo-vaginitis in children no infrequent occurrence. Among 3921 girls whom he saw in the out-patient clinic at Halle, he found this disease in its most obstinate form in 44. Of these 27 were under five years of age, 13 between five and ten, and 4 from ten to fifteen, showing a tendency to diminish in frequency as the age increases. In all of these cases the purulent or muco-purulent discharge had lasted weeks, in the great majority months. Pott declares that when such disease is present, in ninety per cent. of the cases the mother will be found to have a specific vaginitis. The infection can be communicated at birth, but the genitals are much less exposed to the infection than the eyes, hence blennorrhœa is much more common with the new-born.

In the case of older children, the custom which obtains with the poorer classes, of children sleeping with their parents, favors materially such infection, and the reason why girls are so much oftener affected than boys lies in the fact of the much more exposed situation of the mucous membrane in the former than in the latter. In only two cases could attempted rape be charged as the cause.

Six cases of the whole number depended upon congenital syphilis. In a very few cases the presence of some foreign body was the cause, but not once was the much accused oxyuris vermicularis found.

Pott recommends in all cases the ocular inspection of the parts affected, as well as the digital exploration, and the use of the speculum. That the hymen is ruptured by such examination he considers a benefit rather than otherwise, as treatment which was fruitless with an intact hymen speedily showed good results when that membrane had been ruptured. As speculum he uses a small nasal speculum, and light is thrown in by means of a head mirror.

In addition to the purulent discharge there are apt to be shallow ulcerations on the labia majora, eczema of the surrounding skin, and swollen inguinal glands. The effects on the general health vary according to the stage of the affection. In the very earliest stage of acute infection there is considerable febrile disturbance, symptoms of cerebral excitation, sleeplessness, and even muscular twitchings. These disappear in a few days, and then for months the purulent discharge may continue without the general health being much affected. Later the children become anæmic, look pale or sallow, the nutrition suffers, and a nervous excitability becomes manifest.

The longer the affection has lasted the less easily does it yield to treatment. In the most chronic cases both injections and applications, with a brush, of astringents and other medicinal agents failed completely. This has seemed to the author to depend in many cases on the fact that the vaginal secretions had no free exit, owing to the small hymeneal opening, and pus collected in considerable quantities behind the membrane. He was led to this opinion by observing that in cases where the hymen was torn by the introduction of the finger, improvement followed rapidly.

A method of treatment, however, which the author has employed with most brilliant results in a very few recent cases, may render this harsher method superfluous. Iodoform, either blown in in form of powder, or applied in the form of bougies of the size of a thin lead pencil, has cut the affection short as if by magic. Of twelve cases treated in this way in only two was it necessary to repeat the application. In no case did a relapse occur.

DRAINAGE IN PERITONEAL OPERATIONS.

A. Martin, of Berlin, in this brochure,[4] combats the principles laid down by Bardenheuer in favor of peritoneal drainage. He first shows from some cases in his own experience that the absorptive power of the peritonæum is practically unlimited, and that its tolerance is very great. The farther argument of Barden-

[1] Berl. klin. Woch., No. 36, 1882.
[2] Berl. klin. Woch., No. 12, 1882.
[3] Jahrbuch für Kinderheilkunde, xix. Band, 1 Heft, 1882.
[4] Sammlung klinischer Vorträge, No. 219.

heuer with regard to the leaving of large wounded surfaces in the peritoneal cavity, Martin replies to by saying that it is usually possible to cover such wounds in one or another way with peritonæum, and so shut them out from the abdominal cavity. Antiseptic treatment is presupposed.

Martin gives as exceptions, first, those cases where portions of tissue already suppurating cannot be removed at the operation, and second, cases in which it is impossible to avoid a communication between the peritoneal cavity and the vagina, as in the case of the cyst wall of extra-uterine pregnancy and in extirpations of the uterus. Under these circumstances Martin favors primary drainage, which, in the case of remaining cyst walls, he carries out in this way, that he establishes a communication between the deepest portion of the cyst and the vagina, and completely cuts off the upper portion from the peritoneal cavity by sutures. In four cases treated in this way the result was excellent.

In cases of the second class, primary drainage was employed twenty-two times, but in only a part of the cases was the drainage tube used for washing out the lower part of the pelvic cavity. Martin has never seen favorable results from drainage of the peritoneal cavity after septic absorption has taken place.

RELATIONS OF THE THYROID GLAND TO THE FEMALE GENITAL ORGANS.[1]

The author of this interesting and important dissertation confines himself entirely to those enlargements of the thyroid which result from congestion and simple hypertrophy. Such swelling may be found in fœtuses and new-born infants as a result of congestion at time of birth from faulty position (especially face and forehead presentations) and tedious labor, and has very little importance, as it disappears quickly. Occasionally the affection seems to have begun in fœtal life, due to hereditary or endemic causes, and in such cases the prognosis is bad, very few children surviving. Four cases were reported from the Strassburg Maternity Hospital, three of which were interesting on account of the treatment employed. To prevent the violent attacks of dyspnœa, which are the result of the pressure of the tumor, the head was brought into hyperextension by a roll placed in the nape of the neck. The dyspnœa was relieved, and in a few days a shrinking of the gland could be observed.

That there is some connection between the thyroid gland and the female genital organs has been known for a long time. At the time of puberty a swelling of this gland often occurs in both sexes, especially the female. It is a congestion undoubtedly due to the quickened circulation noticed at this time in various organs, similar to the momentary enlargement of the thyroid during sexual excitement.

During the menstrual period as well is there, in some persons, a swelling of the gland, and the degree of enlargement may correspond to the amount of the menstrual flow. Most of the permanent enlargements begin during menstruation, and disorders of this function, especially amenorrhœa, lead to swelling of the thyroid.

During pregnancy there is almost constantly an enlargement. Of fifty examined by Freund on this point only five were found to be free from it. It may become so large as to give rise to alarming and even fatal suffocation. During labor an average increase of one and one half centimetres was found, which disappeared in from twelve to twenty-four hours. The increase observed during pregnancy also gradually disappeared in the course of a few weeks, and in half the cases only was there any increase during lactation. Freund has had no opportunity to observe whether senile involution of the genital organs inclines to hypertrophy of the thyroid, a fact which is maintained by some.

Very little is known about the pathological relations of the two. Basedow's disease is an exception. This affection, in which an enlargement of the thyroid is one of the most constant appearances, is much more common among women than men, develops almost without exception during the period of sexual activity, and particularly during pregnancy, and the trouble may disappear after confinement. The father of the author found in all cases of this affection which he observed the so-called parametritis chronica atrophicans.

[1] H. W. Formad, Inaug. Diss., Strassburg, 1882.

FREQUENCY OF DISEASES OF THE SEXUAL ORGANS IN INSANE WOMEN.

Dr. Danello[2] examined two hundred insane women, and found that one hundred and sixty-two, or eighty per cent., were suffering from various diseases of the sexual organs. Out of one hundred and forty menstruating women, between fifteen and forty-two years of age, only twenty were without some uterine anomaly. Of sixty women who had ceased menstruating, between forty-two and seventy-five years of age, eighteen had some lesion of the genital organs. The most common forms of disease were acute and chronic endometritis and metritis, then displacements of the uterus, dysmenorrhœa, acute and chronic ovaritis. These results show that the complication of mental disease with uterine disease is extremely common.

EXTIRPATION OF THE UTERUS PER VAGINAM.

Professor Czerny,[3] of Heidelberg, claims that when extirpation of the uterus by abdominal section had, on account of its great mortality, lost credit with the profession, he showed that the operation per vaginam would in many cases give better results. The reasons are that the boundaries of the disease are better made out from the vagina, wounding of bladder and ureters more easily avoided, the danger of shock from exposing the bowels lessened, and the danger of septic infection of the peritonæum by the cancerous masses not so great. Czerny has collected eighty-one cases of vaginal extirpation of the uterus, and gives the results as follows: Of the whole number fifty-five recovered, and twenty-six died, giving a mortality of thirty-two per cent., while Hegar and Kaltenbach give seventy-one per cent. as the mortality following the abdominal operation of Freund. To show what may be done by a careful selection of cases, the author cites the experience of Olshausen and Schroeder, who, out of fourteen, lost but one, and that from primary hæmorrhage. Then follow the histories of nine cases operated on by Czerny, three of which died from sepsis. Czerny describes in full his method of operating, and at the end gives the following indications:—

The vaginal extirpation (colpo-hysterotomy) is especially indicated for carcinoma of the cervical canal as long as the uterus is movable and not particularly enlarged, and the pelvic outlet of normal size. To

[2] Deutsche Med. Zeitung, No. 18, 1882.
[3] Berl. klin. Woch., Nos. 46 and 47, 1882.

reach it better the perinæum may be divided in the median line, and later sewed up.

The supra-vaginal amputation of the cervix is indicated in the cases of papillary and ulcerating carcinoma of the cervix when the disease has not reached the internal os. Even if it has affected the vaginal cul-de-sac, that is no contraindication if the uterus is movable.

The abdominal method (laparo-hysterotomy) is indicated when the uterus is movable with difficulty or much enlarged, or when there is a contracted pelvis, provided we may hope to remove all the disease by the operation.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

CASES IN THE SERVICE OF DR. GEORGE B. SHATTUCK.

REPORTED BY CHARLES D. SAWIN, MEDICAL HOUSE OFFICER.

CASE I. TYPHOID FEVER COMPLICATED WITH PNEUMONIA AND PERIODICAL CHILLS. RECOVERY.

Abrian T., thirty-two years old, a native of Finland, was admitted September 19th, with a history of one week's illness, beginning with headache, epistaxis, and diarrhœa. No cough or other chest symptoms excepting a little shortness of breath. Anorexia and thirst. No rose spots to be seen. Some iliac tenderness, and distension of abdomen. Tongue moist, and covered with a brown coating. Spleen somewhat enlarged with a vertical line of dullness of nine centimetres, and could be felt very easily under the ribs after a long drawn inspiration. Temperature, 102.6° F.; pulse, 104.

Owing to his unfamiliarity with the English language, an incomplete history was obtained; but he positively affirmed that he had a severe rigor two days previous to his admission to the hospital. Examination of chest showed nothing abnormal beyond a few sonorous râles in both backs. On the next day two or three doubtful rose spots were seen on abdomen.

A well-marked chill this forenoon (20th,) at ten o'clock, followed by a rise in temperature to 103.5° F. A subcutaneous injection of five grains of quinia undoubtedly mitigated its severity somewhat. Five grains of quinia were then given daily at four or five o'clock A. M.

On the 21st another chill at eleven o'clock, but of less violent character. Sponge baths every two hours when the temperature is above 102° F.

September 22d. Patient was taken with a violent cough, accompanied by little or no expectoration. Numerous sonorous râles were heard all over left front, and slight dullness and fine moist râles on both inspiration and expiration over a small area just below and to inside of lower angle of left scapula.

September 24th. Cough very distressing; no expectoration; complete flatness over lower left back, with numerous crepitant râles on inspiration alone; bronchial respiration quite well marked; sonorous râles as before mentioned; cotton jacket applied; cough mixture *pro re nata*; baths and quinia omitted.

September 25th. This morning temperature was 103° F., and ten grains of quinia were given by cachet. More comfortable on the 26th. Patient had no stimulant till the 29th, when the pulse, which was not very frequent, became perceptibly weaker. Brandy, one half ounce, every four hours.

October 1st. Dullness at lower left back with the returning crepitant râles; broncho-vesicular respiration and diminished vocal fremitus; general condition much improved; no diarrhœa; tongue quite clean; diet increased.

October 6th. Only a small area of dullness at lower left back, where are heard crepitant and a few fine moist râles; sputa thin and serous.

October 16. Percussion of chest normal; few fine râles in left back; brandy omitted.

Discharged well on the 17th.

CASE II. PERITYPHILITIS. DEATH.

Dr. F. W. Draper on duty.

F. K., forty-seven years old, always enjoyed good health till five days before coming to the hospital, which was on the 27th of August. The attack began with a severe pain in right iliac fossa, which subsequently extended over the whole abdomen, and was accompanied with almost constant bilious vomiting; anorexia; no dejection for four days past; no epistaxis; tongue coated, brown, and parched; temperature, 98.7° F.; pulse, 100; urine high colored; acid, specific gravity, 1022; chlorides diminished, with a trace of albumen; sediment not abnormal. Sol. magendie, four minims every two hours, *pro re nata*, for relief of pain; brandy, one half ounce, every hour and a half; poultice every four hours to right inguinal region; some difficulty in voiding urine, and catheterization became necessary.

August 28th. Vomited three times during the night, but at longer intervals than on yesterday; hands cold and clammy; pulse small and feeble; abdomen tympanitic, especially in right side; less pain; one dejection this morning; morphia and hot applications continued. August 29th. Still in a critical condition; almost pulseless; abdomen much distended; occasional vomiting of bilious fluid; continues to remain under the influence of morphia. August 30th. A little gain; pulse can be counted at wrist; less tympanites; extremities warmer; later in the afternoon, however, signs of collapse were exhibited quite suddenly, and incessant vomiting set in, followed by much intense abdominal pain, which soon ended fatally.

Autopsy by Dr. W. W. Gannett.

Abdomen enlarged. Omentum adherent to the folds of intestine. Intestine distended with gas, with the folds adherent to one another. Outer surface not lustrous, but in some places was covered with an abundant fibrinous false new membrane. "Between the folds of the intestine and pelvis, and right iliac region, there was, in addition to the fibrine, a considerable amount of creamy pus. The first fifteen millimetres of vermiform appendix was pervious, and large enough to admit the tip of the little finger, the remainder of the lumen being impervious. There was a perforation of the vermiform appendix just at the end of the cul-de-sac described, and just to the outside of the opening lay a ragged block of fæcal concretion about the size of the finger. This lay in a pool of pus. In its neighborhood the inflammatory signs were most marked. Mucous membrane of intestine showed nothing unusual."

CASE III. MEMBRANOUS DYSMENORRHŒA [?].

Dr. F. W. Draper on duty.

Margaret M., thirty-three years of age, admitted to

hospital August 2d, had been married eleven years, and during this period had had two children, and three or four, perhaps more, supposed miscarriages. The first child was delivered by means of instruments about nine years ago, and there resulted a slight perineal laceration, which was sewed up at the time, and did not rupture again till two years ago, when she was delivered of her second child (still-born). Since the second baby was born her catamenia have been very irregular. No menstrual flow for last two months till a fortnight ago, when she flowed for a single day, but only moderately, and the flow was accompanied by considerable pain. It then ceased, and did not reappear till a week ago. Returned again to-day, but is still slight. Excessive pain in neighborhood of umbilicus two weeks ago. Some pain, though not intense, in hypogastrium to-day; occasional nausea and vomiting; anorexia and headache; micturition normal; constipation; temperature 100° F.; pulse 100; urine normal.

Flowing constant on August 3d.

August 4th. Some vomiting this morning; headache and flowing. Milk and lime water. Ten minims of fluid extract of ergot every four hours.

August 7th. Flowing partially under control.

August 8th. A very copious discharge from vagina, consisting mainly of a shreddy membranous mass of a reddish-gray color, about size of thumb, being cast off without much pain. Flow then ceased altogether, and patient practically well. Discharged on the 10th.

Specimen examined by Dr. W. W. Gannett microscopically, and following report made: —

"Both surfaces" of the mass are "more or less rough, and show a shreddy appearance. It is made up of numerous spindle cells, with short, broad bodies and well-marked nuclei, also very numerous smaller round cells; many portions of tubular glands. *I found no chorion villi.* The above represents the greatly thickened mucous membrane of the uterus, which has been cast off."

No decision was reached as to whether it might be the membrane of "dysmenorrhœa membranacea" or the decidual membrane of early pregnancy.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

T. M. ROTCH, M. D., SECRETARY.

JANUARY 8, 1883. DR. J. C. WARREN presided.

DR. HENRY W. WILLIAMS read a paper entitled

ORBITAL CELLULITIS AS A SEQUEL OF FACIAL ERYSIPELAS.[1]

IN answer to Dr. C. P. Putnam, DR. WILLIAMS stated that it is a rare affection. Dr. Putnam asking if any case had been left to itself, Dr. Williams answered, Yes, one case, and it was attended by great pain. Lebert had collected a number of cases and four fifths were fatal. The vessels, before entering the nerve, are compressed, and thus vision is lost without affection of the nerve.

DR. WHITE asked if these cases are likely to follow the deeper seated cases of erysipelas or the wandering, mild form.

DR. WILLIAMS thought usually the deeper seated, but in the child spoken of the erysipelas was of the mild form, this coming as a secondary affection when the erysipelas was passing off.

DR. PORTER referred to a case, seen some years ago, of acute cellulitis of both orbits, following apparently a small sore on one side of the nose. There was no erysipelas, the soft parts were œdematous and infiltrated equally on both sides. He was delirious and was etherized and free punctures made above and below, Dr. Wadsworth being in consultation. Leeches were applied to forehead, and free punctures were made again, but delirium continued, and he died with stertorous breathing after in all four days. The case seemed similar to those following erysipelas. The punctures were carried deeply, undoubtedly deep enough, as it was done with regard to the anatomy of the parts and with the careful assistance of Dr. Wadsworth.

DR. GANNETT asked if any post-mortems were made in the fatal cases. Dr. Williams thought not.

DR. WARREN asked Dr. Williams if there were other causes of blindness in facial erysipelas than those mentioned. In the books this class is frequently mentioned as one of the sequelæ of the disease, and he had acquired the impression that it might occur without a suppurative inflammation having preceded. The presence of suppuration in the cellular tissue in typical forms of erysipelas like these was interesting in connection with the question of identity of phlegmonous erysipelas with true erysipelas. The French writers consider the former as a diffuse cellulitis (*phlegmon diffus*), and not as an erysipelas.

DR. WARREN did not believe that we could abandon the term phlegmonous erysipelas, which could be appropriately applied to a large class of cases familiar to the hospital surgeon.

DR. GOSS reported a case of

CANCER OF THE LEFT KIDNEY AND LUNG.

A gentleman, aged fifty-five, in the spring of 1880, without acknowledging his illness, seemed to his family unwell, and his physician was called. He had some cough, nausea, and occasional vomiting of meals, an anxious expression, and he confessed to not feeling well, though he protested that he was not sick. His own family had been consumptive. An examination of the chest showed nothing abnormal except comparative dullness of the lower part of the left lung, with a want of vesicular murmur; no râles. Nothing could be discovered about the stomach or other parts of the abdomen. Urine, on examination, was normal, as were also the pulse and temperature. He continued to show increasing evidence of sickness, food not seeming to nourish him, and being frequently vomited. The gastric symptoms increased during the spring and summer of 1881, and when at the latter time he went to the sea-shore he was so weak that it was feared the journey might be disastrous to him. While at the sea-shore his stomach gave him less trouble, his appetite improved, and he returned home apparently better, but in a month or two the old symptoms reappeared. He lost flesh and spirits. With great difficulty, but with determination, he went to his business in the city, falling in the street several times from weakness. All through last summer he gradually failed. The latter part of the season his urine began to contain a small amount of albumen and a few casts. The symptoms about the

[1] See page 51 of this number of the JOURNAL.

chest became less marked, but he grew weaker, more emaciated, took to the house, and some six weeks ago to the bed. His urine became more decidedly albuminous and the casts abundant. The abdomen was frequently examined for evidence of disease, — tumor or other —, but until within a few weeks nothing could be discovered. Latterly, however, the suspicion that something of the kind must exist seemed in a measure to be confirmed. Occasionally there appeared to be a tumefaction on the left side about the region of the false ribs, but this was not marked. During the past three weeks he had several convulsive paroxysms, thought to be uræmic. He sank at last from exhaustion, death occurring two days ago.

Autopsy by Dr. Gannett.

DR. GANNETT said that the interest of the autopsy lay in connection with the left kidney and the left lung.

The left kidney was enlarged, perhaps, three times; its external surface lobulated, rather dense. On section very little of the renal substance remained. In its place were numerous nodules about the size of English walnuts, coalescing on their borders. They were of a grayish-white color; some softened in their central portions and more opaque, evidently the result of a fatty degeneration; others showed an opaque-white, firm centre, representing in all probability a coagulation necrosis.

The pelvis of the kidney was considerably dilated, and there existed a growth into it from the previously described mass.

The left renal vein was much distended, and contained a growth extending from the kidney and reaching the inferior vena cava. Ample opportunity was thus afforded for the transfer of portions of the growth by the blood circulation. That such a transfer had occurred was shown by the presence in the lower lobe of the left lung of a nodule similar in character to those found in the kidney, and about the size of a lemon.

Microscopically all the nodules described presented the structure characteristic of the softer forms of cancer.

In reply to a question of Dr. Lyman, DR. GOSS said that there was no evidence of blood in the urine. He also said that there was a family history of phthisis, but not of cancer, but that the so-called cancer cachexia was present.

NEW YORK NEUROLOGICAL SOCIETY.

AT the regular monthly meeting of the Society, held January 2, 1883, DR. S. N. LEO presented patients who had been trephined for traumatic epilepsy, and was followed by DR. L. WEBER, who presented a specimen of occlusion of the basilar artery, after which DR. WILLIAM A. HAMMOND read a paper on

ALLOCHIRIA: ITS NATURE AND SEAT.

On the 4th of November last, Dr. Hammond said he had examined, in conjunction with Dr. L. A. Stimson, a gentleman who was said to have received a severe injury of the spine in February, 1881, from a carriage accident. He was treated for several months for Pott's disease, his condition sometimes being better and sometimes worse, but on the whole there was no decided improvement. The fact that he had brought an action for heavy damages against the city was the immediate cause of his examination by the writer. So far as he could determine from the account given him by the patient, he felt satisfied that at no time had he suffered from injury of the vertebral column or subsequent Pott's disease, and, at all events, he exhibited no symptoms of that affection at the time of this examination. Neither Dr. Clymer, Dr. Hamilton, Dr. L. A. Stimson, or himself could discover indications of its existence. He complained, however, of pain throughout the whole spinal column, and of extreme nervous irritability. He had also had contractions of the muscles of the lower extremities, and when he walked about the room it was evident that his limbs were stiff, and that he lifted his feet with difficulty. The gait, however, was very different from that of a person suffering from locomotor ataxia, as the feet were moved as though weighted with some heavy substance, instead of being raised with a jerk, and put down with the two distinct movements so characteristic of that affection. The knee tendon reflex was greatly exaggerated on both sides.

Up to this time no experiments had been made for the purpose of testing the sensibility of the lower extremities. It was now ascertained that the touch of the finger, the scratch of a pin, and a deep puncture with the blade of a penknife were equally unfelt in the right leg, but when the like experiments were made on the left leg (the patient's eyes being closed all the time) he complained of pain when the knife was stuck into it, and automatically carried his hand to the place which he supposed had been punctured. Instead of touching the spot where the injury had been received, however, he indicated the exactly corresponding situation on the other leg. Repeated experiments led to the same results. He had sensibility in the left leg, but invariably referred impressions received there to the other side.

Dr. Hammond said he then came to the conclusion that the patient was suffering from antero-lateral or lateral sclerosis, with the implication of the posterior horns of gray matter, and probably of the spinal meninges to a slight extent. On this occasion, however, he wished to restrict what he had to say about the case to the phenomenon of crossed sensibility exhibited. To this condition the name of allochiria (from the Greek words ἄλλος and χείρ) had been given by Professor Obersteiner, of Vienna, who was the first to call special attention to it, though the phenomenon had been incidentally alluded to by Leyden, and one or two others as an occasional symptom of locomotor ataxia. Since Obersteiner's article appeared in *Brain* for July, 1881, Ferrier had reported a case (in the same journal for October, 1882,) which followed a severe cranial injury. Of Obersteiner's cases of allochiria four in number, two were of locomotor ataxia, one was hysterical, and one resulted from severe and direct injury of the spine. In the last case the patient died, and post-mortem examination showed that there had been inflammation of the first, second, and third lumbar vertebræ, meningitis, and extensive transverse inflammation of the cord. The posterior columns for a considerable distance above the seat of injury, as described by Obersteiner, were in a state of sclerosis, and the posterior horns of gray matter in portions of the cervical enlargement were transversely divided by a peculiar, structureless, transparent mass, intensely colored by carmine, and very similar to the mass found around the larger vessels in inflammatory processes in

the cord. Dr. Hammond then expressed the opinion that it was to such a lesion of the posterior horns of gray matter that the phenomenon of allochiria was to be ascribed, though neither Obersteiner or Ferrier had offered any explanation of the mechanism of its production. Allochiria was certainly not an ordinary symptom of sclerosis of the posterior columns, and he did not believe that it was ever met with in uncomplicated cases of this affection. He did not, indeed, believe it a possible condition in such instances.

For the better understanding of the subject he thought a few words regarding the anatomy and physiology of the cord would be of service. The posterior tract of gray matter, he said, was probably the only channel by which sensory impressions reached the brain; but before reaching the posterior horns the posterior roots of the spinal nerves passed through the columns of Burdach, and when these were the seat of inflammation, as was the case in locomotor ataxia, disturbances of sensibility were produced in the parts below, by the pressure exerted upon these roots. It was quite certain, as claimed by Brown-Séquard and other authorities, that there was an almost complete decussation of the sensory fibres within the gray matter; those from the right side of the body passing over to the left side of the cord, and *vice versa*. Dr. Hammond illustrated this by a diagram, and showed that a lesion of the right posterior horn would produce anæsthesia of the left side of the body, and *vice versa*. He then went on to say that in sclerosis of that portion of the posterior columns called the columns of Burdach the lesion was almost always symmetrical, and, as a consequence, we had in the latter stages more or less profound anæsthesia and retardation of the conveyance of sensory impressions in both lower extremities. Allochiria was in such cases an impossibility; for, all channels to the brain being closed, wholly or in part, the patient either had no sensation or very imperfect sensation in the parts below, and equally on both sides. But in cases of disease or injury of the posterior horns of gray matter, whether primarily or secondarily involved, in which allochiria existed, it was essential either that the lesion should be unilateral or, if both horns were involved, that the lesions should be at different levels. This was also made more evident by means of a diagram. Thus it was seen that if there were a lesion in the left posterior horn a sensation coming from the right side of the body would be directed through the gray commissural fibres to the right posterior horn, and would reach the cortical centre in the right hemisphere, which was in relation with fibres coming from the left side of the body. The crossed sensations resulting would constitute the condition of allochiria, in which all sensations made, for instance, on the right side of the body would be felt on the left; while those on the left side would be felt in their proper situations. But if it were supposed that there was another lesion symmetrical with that at the point above indicated, it would be evident that no sensoid impressions from either side could reach the brain. If, however, the second lesion were at a point lower down than the first, the impressions coming from the right lower extremity would be diverted to the left side on reaching the obstruction, and then reaching the obstruction higher up on that side would either be altogether interfered with, leading to complete anæsthesia of the left lower extremity, or would be again diverted, and reaching the right hemisphere of the brain, though with their strength greatly diverted, would be imperfectly felt in the left lower extremity. Such lesions explained those cases in which there was absolute anæsthesia on one side of the body, with sensation on the other side for impressions coming from both sides. They also showed, as Obersteiner had asserted, that anæsthesia was not a necessary concomitant of allochiria. In the only case of allochiria in which a post-mortem examination had been made, namely, the fourth case of Obersteiner, it was found that among the other abnormal conditions disease of both posterior horns of gray matter was present. The morbid process was not continuous, however, as it was stated that it was not perceived in all the sections. It was situated at the narrowest part of the posterior horns, being so placed as to interrupt the decussation of all the nerve fibres, and hence to cause the transmission of sensory impressions upward on the side in which they entered; a condition, which, equally with that which the writer had described, would give rise to allochiria.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, RECORDER.

Thursday Evening, December 28, 1882. The President, Dr. Tyson, in the chair.

TUBERCULOSIS OF SPLEEN, LIVER, AND KIDNEYS.

Exhibited by Dr. Shakespeare.

These specimens were presented without a history of the case, and showed exuberant vegetations in pericarditis, abundant miliary tubercles of the pleura, of the spleen, of the liver, of the kidneys, and of the lymph glands in the region of the head of the pancreas. The subject came from the medical wards of the Philadelphia Hospital, and was last under your care, Mr. President, as visiting physician. They are brought to the notice of the Society mainly because the autopsy was made this P. M., and because many of the members have not had opportunities of examining such perfect examples of extensive and diffuse tuberculous infiltration without more serious involvement of the parenchyma of the lungs.

Autopsy, six hours after death, of C. J., colored, aged sixty. Diagnosis: pericarditis and pleuritic effusion, with strong bands of adhesions between parietal and visceral pleura. Thorax: Left pleural cavity completely obliterated by adhesions. Right pleural cavity contained a large amount of straw-colored serum. The lobes of this lung were compressed against the spinal column, and were atelectatic. The lower lobe was firmly adherent to the diaphragm, and the three lobes were strongly united by adhesions. The parietal pleura was thickened and everywhere studded with minute gray, semi-opaque miliary tubercles; the visceral pleura was in a similar condition, except that the tubercles were less numerous. The cut surface of the right lung presented nothing abnormal save absence of air, but the sense of touch showed beneath and near the pleura a few scattered minute points, much smaller than millet seeds. The pleura of the left lung was also studded with numerous miliary tubercles, and the tissue of this lung was similar to that of the right. It was, however, crepitant. The pericardial sac contained two and a half ounces of straw-colored serum. The whole heart was covered with an

exuberant crop of vegetations. The cardiac walls were, perhaps, slightly softer than usual; otherwise normal. Abdomen: Peritonæum normal, no effusion. Liver slightly enlarged, with surface here and there raised by flat elevations, ranging in size from a hempseed to that of a hazel-nut; capsule normal. The nodules were firm and of a yellowish tint; the intervening tissue was of a dark red. Section of the organ deeply revealed similar nodules diffused through its substance, which seemed otherwise firm and normal. The spleen was slightly enlarged, firm, and extensively infiltrated with tubercles. The pancreas was normal, but the lymph glands near it were much enlarged, but neither softened nor caseous. No caseous focus was anywhere detected. The kidneys appeared normal except for one or two more or less pyramidal yellow points. This case presents several points of interest: (1.) Former history unknown. (2.) Several aspirations, removing considerable pleuritic fluid. (3.) What was the origin of the numerous tubercular irruptions, and, if there was auto-infection, what was its probable source? Dr. Tyson then gave a *résumé* of the ante-mortem history.[1]

DR. TYSON said he regretted having to admit that he was less familiar with the history of the case than he should have been, since the patient was in his own wards in the Philadelphia Hospital. It had been previously thoroughly studied by Dr. Bruen, whose absence he regretted, as Dr. Bruen knew so much more about the case. The man had, however, been more than once tapped. He was a colored sailor, aged sixty years. When Dr. Tyson took charge of the ward, in September, the man presented the physical signs of double pleuritic effusion, orthopnœa, feeble transmitted heart sounds, but no cardiac murmur. There was œdema of the legs. He was tapped with great benefit, and under a restorative treatment he rapidly improved, so that he soon became one of the walking cases in the ward, attracting little attention. About December 1st he became very much worse. The orthopnœa and other signs of accumulating fluid returned, and so did the œdema of the legs. His urine was repeatedly examined for albumen, with negative results. He was tapped upon the right side, and three pints of fluid removed, with but partial relief. The other side was also aspirated without success. A cardiac friction sound was noted, which seemed to be pleuro-pericardial, but in the light of the autopsy it was probably pericardial. He died on the 13th of December. With reference to the case cited by Dr. Formad, it had also seemed to be a simple plastic pleurisy with feeble, distant heart sounds, with no murmurs occurring in a case where, after prolonged illness, death resulted from exhaustion. Dr. Tyson had never seen such extensive new formations resulting from serous inflammation, the large lymphoid masses in the abdomen having at first suggested the idea of malignant disease. The patient had a distinctly scrofulous history. The father had died after pleurisy with cheesy deposits, followed by miliary tubercles of the lungs later in life. Four or five uncles and one aunt had all died phthisical between twenty and thirty years of age.

DR. BARTHOLOW asked if the range of temperature accorded with that usually found in phthisical cases.

[1] Dr. Formad here related a case of general tuberculosis, and showed the specimen, but no notes having been forwarded to the Recorder any fuller account than the remarks of Dr. Tyson is impossible.

DR. TYSON said that in the case related by Dr. Formad the temperature was seldom if ever above 101° F., mostly below this point. In the case reported by Dr. Shakespeare he was unacquainted with the temperature record.

DR. NANCREDE demurred to the view that repeated tapping had any causative relation to the development of tubercle after pleurisy, but thought that the chronicity of the affection and altered condition of the pleural sac, which demanded frequent operations, were the real explanations of the alleged fact.

DR. MUSSER said that a relationship between pleurisy and pulmonary tuberculosis could not be denied, but whether the pleurisy or the tuberculosis be antecedent was difficult of solution. That the former is primary may be inferred from the fact that persons are considered as threatened with phthisis who have subclavian arterial murmurs, due to the pressure or pulling on the artery of organized lymph. Likewise are the various friction sounds and exocardial murmurs noted to precede tuberculosis, and especially to occur in those tuberculously predisposed. Examples of both cases have come under his observation. It seems to him that a primary acute pleurisy is a rarity, occurring in a non-tubercular subject. The last series of cases of what would be called primary pleurisy he had seen were in persons predisposed to tubercle, and in some of the cases tubercle subsequently developed. In short, so-called primary plastic pleurisy occurs only in tuberculously disposed individuals; other forms are secondary to some other process, as Bright's disease, septicæmia, etc. Trousseau calls attention to latent pleurisies with effusion as being often an expression of a tuberculous diathesis, while also a latent pleurisy may occasion development of that diathesis. Two cases illustrating these views have lately come under his notice.

DR. O'HARA said that although he had not had much experience with latent pleurisy, he recalled a case of a young man seen five years ago, where extensive effusion into one side of the chest had unsuspectedly occurred, and when detected had been removed by tapping. Apparent recovery then ensued to be followed, in a few weeks, by copious effusion into the other pleural cavity. Tapping was again resorted to; the effusion never recurred, and the patient remains healthy and free from tubercle at the present time. He would like to ask if, when the term "all the serous membranes were affected" was used, those of the brain were included.

DR. TYSON replied that there had been no head symptoms in the sailor's case. In that mentioned by Dr. Formad decided mental aberration, demanding watchful restraint, had been present. No inflammation of the meninges had been found, the only disease consisting of a small tubercle starting from the pia mater and dipping down into the brain substance.

DR. SHAKESPEARE closed the debate by referring to the causes of tuberculosis in general and its mode of diffusion through the organism. He called attention to the failure in discovering any caseous focus, while admitting the possibility of such, if minute, escaping the most painstaking search. In this and similar cases all that could be safely said was that *the caseous point was not found.* Assuming, for illustration, that the point in the kidney might have been the origin of the auto-infection in this case, he referred to the communication between the left renal vein and the

inferior mesenteric vein, and the direct communication with the portal system thus effected. As to the point raised by Dr. Musser, he believed in plastic pleurisies distinct from tuberculosis. He had examined very many microscopic sections of pleuritic adhesions, and very many had proved to be free from tubercle. Authors who have made original investigations on man and the lower animals have also as distinctly recognized a plastic pleurisy *without* tubercle as they have one associated with this formation. He thought tapping in a person not predisposed to tubercle was no more likely to produce this disease than tapping an anasarcous limb. He was well aware of the facts dwelt upon by Drs. Musser and Formad, namely, the association of tapping with tuberculosis, and of plastic pleurisy with tuberculosis, but he believed that the frequency of this association had been exaggerated. He thought that in view of the well-grounded belief that in certain classes of animals, as well as in certain families of men, inflammation tends to linger, to produce accumulations which are prone to degeneration, and to *excite* local or general tuberculosis, it is more logical to conclude that in such cases as above mentioned there is at the outset a tainted constitution, — a soil already sowed with the dormant seeds of disease waiting to be awakened to their active processes of destruction by the stimulation of an exciting cause. The more frequent the action of the exciting cause the more certain is this dormant tendency to be aroused. [Dr. Shakespeare then proceeded to combat the views advocated by Dr. Formad in this debate; owing to their non-reception by the recorder Dr. Shakespeare's remarks are also of necessity omitted.]

TWO CASES OF CARCINOMA OF THE STOMACH.

Exhibited by J. H. Musser, M. D.

Case I. Scirrhus of the pylorus; general proliferation of the connective tissue; interstitial nephritis. Malignant disease of the pylorus and of the lesser curvature of the stomach was diagnosticated when the patient applied at the Medical Dispensary of the University Hospital, May 14, 1882, for treatment, on account of the physical signs especially and of some points in the clinical history. Palpation and percussion revealed a firm, non-pulsatile, immovable, slightly painful tumor in the middle of the epigastric region, one inch to the left of the median line, about the size of a turkey egg. When lying down the abdomen was slightly scaphoid; but the left upper quarter was distended. A curved line extending downwards from the umbilicus to the flanks represented the lower limit of this swelling, which was soft and resistant, tympanitic on percussion, and with care could be discerned as starting from the hard tumor in the epigastrium. In short it was due to a distended stomach. Although the tumor was not in the position of the pylorus, and although the patient had never vomited, yet pyloric disease was determined upon because of the gastric distention. On account of the absence of marked obstruction, the position and the occurrence of pain in the *lumbar* region, disease of the lesser curvature and the posterior wall was decided upon. The autopsy revealed that the malignant growth surrounded the stomach at the pyloric end, but was greater in extent in the lesser curvature. An adhesion to the left lobe of the liver explained the position of the tumor. The patient first noticed the localization of the disease in November, 1881, by the occurrence of pain in the epigastrium following a jar. She noticed that her health had failed three months before, and that menstruation had ceased six months previous to the epigastric pain. Note here the failure of health before any local evidences of disease, not even dyspeptic symptoms. She was a widow, aged forty years, with one child; her health had always been very good; her circumstances moderate, and her habits exemplary. In addition to a constant burning pain, increased by food, her appetite was poor, tongue pale, with enlarged papillæ; flatulency was marked, and the bowels constipated. She presented a sallow, cachectic appearance, was somewhat emaciated, extremely anæmic, with cardiac, arterial, and venous blood-murmurs, and accentuated second-sound. She was under observation until her death, October 17, 1882. The pain and constipation were relieved by treatment, but the course was only downwards. In addition I may note the cachexia became more marked, and the classical appearance of the face was wonderfully depicted — transverse and vertical lines on the forehead, and semi-circular lines around the mouth from the alæ of the nose to the chin and vertical lines on the chin and lower lip. The hue of the countenance changed, growing darker and darker. This peculiar hue of the face Dr. Musser considered the most reliable symptom of approaching dissolution. It was noted one month before death. During the last two months of her illness she suffered much from soreness of the mouth and tongue without visible lesions; from burning in the fauces; difficulty of deglutition; acidity; vomiting taking place every third or fourth day, of a clear, acid fluid, coagulated milk, bile-stained, and "coffee-ground material." A painless, watery diarrhœa occurred frequently with tarry masses. Œdema of the feet and ankles took place six weeks before death. The tumor grew in size and changed position, falling downwards. Three days before death it was noted to pulsate, was tender, and was three inches long, extending from the median line to the left on a level with the umbilicus.

Autopsy twelve hours after death. Extreme emaciation; rigor mortis marked; œdema of feet. Heart slightly enlarged, the left ventricle walls eight and three fourths lines in thickness; heart weighed seven ounces. Aorta one inch, one and three fourths lines in diameter, and slightly atheromatous. Deposits of fat along the septum were noted, and the muscular tissue itself was fatty. The stomach was in the position defined a few days before death, was greatly dilated, with the disease at the pyloric end extending along the lesser curvature four, along the greater curvature two, inches, and completely encircling the organ. The stomach walls became thickened with much hypertrophied muscular coat as they approached the diseased area. The internal surface of the tumor was flat, elliptical, and defined by an everted lip of varying thickness about four lines high. The surface was uneven, some nodules being half an inch thick. The most central portion presented distinct evidences of ulceration.

The liver was rather larger than normal, seemed fatty, and was not indurated. The kidneys were small, hard, and the capsule peeled off with difficulty. Microscopic examination of the stomach, liver, and kidneys, Dr. W. E. Hughes assisting, showed abundant irregularly-shaped epithelial cells packed closely in a fibrous stroma, but slightly developed in and containing numerous nuclei. Liver cells fatty and pigmented. Proliferation of the connective tissue around the he-

patic and portal veins was noted, many nuclei proving its recent origin. The kidney was markedly cirrhotic, the connective tissue being *not* of recent formation. Note the general proliferation of connective tissue in the organs. No albumen was detected during life in the urine, nor were any renal symptoms noted; yet there was undoubted interstitial nephritis belonging to the variety described by Gull, Sutton, and Mahomed. The mal-assimilation consequent upon the gastric lesion was the predisposing factor in the production of this general change.

(*To be continued.*)

Recent Literature.

The Pharmacopœia of the United States of America. Sixth Decennial Revision. By Authority of the National Convention for Revising the Pharmacopœia, held at Washington A. D. 1880. New York: William Wood & Co. 1882. Pages xliii., 488, 8vo.

This so long looked for work has at last appeared. Yet even this so much later date than was expected by the Convention is earlier than the publication of the two previous revisions, which involved but a very small fraction of the labor that has been spent upon this, the most thorough of all the revisions; this unusual promptness being principally due to the unremitted toil of the most efficient chairman of the Committee on Revision, Dr. Charles Rice, of New York city, who has been ably assisted by most of the other twenty-four members. To each of these, as well as to some few other volunteer aids, he sent some hundred and seventy circular letters upon the revision.

The time taken for this, the last revision, has thus been but a little over that taken by Drs. James Jackson and John C. Warren, of Boston, for the preparation of the first American Pharmacopœia, that of the Massachusetts Medical Society, which was ordered by a vote of the Counselors on October 3, 1805. Their manuscript copy was presented June 5, 1807, and the published work had the certificate of Drs. Jackson and Warren, dated December 17, 1807, that it was printed therefrom agreeably to the vote of the Counselors; yet the publishers, according to the even at present not uncommon custom, place the date of the new incoming year 1808 upon the title-page, that the work may appear to be as recent as possible. Thus the Massachusetts Medical Society published not only the first American Pharmacopœia, but they also made the first known effort for the preparation of a National Pharmacopœia. For, according to vol. ii., page 266, of the Medical Communications and Dissertations of the Massachusetts Medical Society, published by the Society at Boston, 1813, "after its publication a copy was sent to the different medical societies, with a circular letter requesting them to examine the work, consider in what respects it needed alterations or amendments, and expressing a desire that some means might be devised to establish a standard work for the United States." This last fact, as thus stated in the official publication by the Society of the historical dissertation read by Dr. Josiah Bartlett at the annual meeting of the Society in Boston, June 6, 1810, is of especial interest on account of the usually allowed claim made in the historical introduction to the first edition of the Pharmacopœia, of which Dr. Lyman Spalding, of New York, was himself the chairman of the Committee of Publication, and repeated in the revisions, that the American Pharmacopœia owes its origin to his project submitted to the New York County Medical Society in January, 1817.

Among the very many important changes made in this revision, of which every physician as well as pharmacist should possess a copy, as it is now in this and some of the other States the legal standard of strength, quality, and purity of all drugs and their preparations which are mentioned therein, the following are some of the more important: All the titles are arranged in one continuous alphabetical list, retaining, however, the several class headings. All measures of capacity have been abandoned except in the case of the fluid extracts; all quantities otherwise being expressed in parts by weight. Most of the fluid preparations have been reduced to some more simple uniform decimal percentage of strength. The nomenclature has been revised on the basis of certain general principles. The botanical genus name of a vegetable drug is the official Latin title, and is to denote the part to be used if there be but one; otherwise the part forms a portion of the title. It will also usually form the English title. The Latin titles of the alkaloids are to end in *-ina*, and the English in *-ine*, while the so-called neutral principle will end in *-inum* and *-in*. The Latin nouns in *-as* and *-is* now again are given their proper masculine gender.

This revision, however, still uses the incorrect term officinal where official should be used. All drugs in a pharmacy which are in accordance with the customary usages of the shop (*officina*) are officinal, while those only of them which have been prepared in accordance with the authority of the Pharmacopœia are official. Even all proprietary medicines are officinal but they certainly are not official.

Alum once again denotes the potassium salt. The strength of the fluid extracts have been reduced about five per cent. Yet the most important change in the strength of any of the preparations is that in the tincture of opium, which has been increased in its morphine strength from thirty-three to seventy-seven per cent., or upon an average about fifty per cent. Especial notice of this important change should be taken by all physicians and pharmacists when prescribing or dispensing this preparation.

In this connection the Committee upon the Revision have made a very important omission in neglecting to make any provision or even any mention as to when the new revision was to go into full legal effect. It would have been well, following the example as to the Pharmacopœia in other countries, to have appointed some date, such as January 1, 1883. In the absence of all such mention it cannot be considered otherwise than to have gone into effect immediately upon its first appearance, as there can well be but one Pharmacopœia of the United States.

The new classes of preparations that have been introduced are the abstracts, triturations, tinctures of fresh herbs, and a single elixir.

In this revision 229 of the former titles have been dropped, while 256 have been added, making 997 titles in all. As an example of the thoroughness of this revision, and of the additions made, fourteen of the new preparations are of iron alone. Among these are ferri carbonas saccharatus, an excellent form for administration, especially to children. The tinctura ferri chloridi is now directed to be kept for at least

three months to secure the development of the proper ethereal character. The ferri iodidum saccharatum has been introduced that an unchanged syrup may be readily made when needed by solution in its own weight of water, while the ferri oxidum hydratum cum magnesia has been introduced for the purpose of having on hand an *immediate* antidote in cases of arsenic poisoning. This mixture when made, containing the hydrated ferric oxide and magnesia sulphate, with a trifling excess of the magnesia, is to be administered at once without any washing of the precipitate, as its taste and contents are entirely unobjectionable. The newly introduced tinct. ferri acetatis has long been a favorite upon the Continent. Syrupus ferri quininæ et strychninæ phosphatum is the new official preparation to replace the many formulæ known as "Aitken's" and "Easton's" syrup of the triple phosphates.

Appended to the work is an extended list of test reagents, volumetric solutions, and tables. These are of especial importance now that all drugs are required by law in this State to conform to certain standards of strength, quality, and purity. As all those bearing official titles must correspond to the standards of the Pharmacopœia it is important that the methods of ascertaining this should be contained in that work itself. Some few of the tables, however, to be inserted in the work, according to the instructions of the Convention, could not be prepared in time to appear in this the main body of the work. It is expected that they will be inserted in a subsequent supplement to the Pharmacopœia. As an aid to the subsequent revision all interested persons are requested to report to the chairman of the Committee before January 1, 1884 and 1889, a list of those articles and preparations which have not been prescribed at all, those but very seldom, and also any objections suggested by experience to the practical working or observance of the methods directed in this work.

The book has but very few typographical errors, considering the nature of the work. The printing and paper are excellent, and the binding good.

With such an extended official list from which the physician can draw his arms for fighting disease, with such full and minute directions furnished to the pharmacist for choosing and preparing them of the proper strength, quality, and purity, with a stringent State statute requiring all drugs to conform to their proper standards, with an active officer employed by the State to examine into and see to it that all this last is done, there is now very little excuse upon the part of the physicians of this State at least for prescribing the preparations of any particular proprietary make. They need simply to indicate the drugs of which they wish to make use, leaving it to the educated pharmacist to make their selection. They can thus only hold him as strictly responsible under the law for the strength, quality, and purity of that which he dispenses.

B. F. D.

Diseases of the Ear in Children. By ANTON VON TROLTSCH, M. D. Translated by J. ORNE GREEN, A. M., M. D.

This valuable work is well worthy of the evident care bestowed upon its translation. It presents plainly and with sufficient elaboration the details of a subject of more importance, in one sense, to the general practitioner than to the special student, since in a great majority of cases of ear disease in children it is the family physician and not the aural specialist who has to deal with them at first hand, and to whom comes the responsibility of administering that ounce of prevention which outweighs the pound of cure.

The book treats, in Chapters I., II., and IV., of diseases of the external, middle, and internal ear respectively. Chapter III. is devoted to the consideration of foreign bodies in the ear, and Chapter V. to the subject of deaf-mutism.

Each of the three chapters first mentioned begins with a short enumeration of the malformations, and then proceeds to a description of the diseases of the respective divisions of the ear and their treatment. Of the 165 pages, 102 are devoted to diseases of the middle ear, a justifiably large proportion of the work, since, as the author says, "It may be asserted as a fact that in childhood, aside from a few weeks immediately following birth, an unusually strong predisposition to diseases of the middle ear exists, owing, on the one hand, to the double influence of the peculiar morphological relations of the ear and the pharynx, and, on the other hand, to the diseases and conditions of life to which the child is frequently exposed." The author says further: "It must become the duty of every qualified practitioner, in a large number of general diseases, especially with children, to inform himself of the condition and powers of the ear, and also to direct the attention of the attendants to this organ without waiting for urgent symptoms to proclaim themselves. In all violent inflammations of the nasal and pharyngeal mucous membranes, the frequency of a simultaneous disease of the mucosa of the ear should be borne in mind; especially in scarlet fever and small-pox, in diphtheria and croup, the ear should never be forgotten, as experience shows both that these affections very frequently extend to this organ, and also that the aural inflammations accompanying them often assume an unusually serious and destructive character."

The responsibility thus urged, and by so eminent an authority, is well worthy of consideration, and a means of preparation for meeting it is had in the careful study of such works as that which is the subject of this notice.

For the special student this book fills a gap left by the majority of the text-books, and with its foot-notes and the bibliographical list which precedes each chapter furnishes a means of ready reference.

For the faithful reproduction of the original which marks this translation the translator merits the thanks both of the profession and the author.

The Illustrated Quarterly of Medicine and Surgery has completed its first year in a manner creditable alike to editors and publishers. Its illustrations are far more effective than words alone can possibly be. It is a new departure in medical journalism, and we trust will meet the encouragement its merits deserve.

— The *Medical Record* on two different pages of the same issue puts the number of physicians in the United States at 65,000, and at 83,000. Even at the former figure we have, according to the estimate of the Medical Academy of Paris, considerably more than one third of all the doctors in the world. Many hands make light work.

Medical and Surgical Journal.

THURSDAY, JANUARY 18, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

DR. ROBERT KOCH'S LATEST ESTIMATE OF PASTEUR'S METHODS AND DISCOVERIES, AND OF THE PRESENT POSITION OF THE GENERAL INOCULATION PROBLEM.

THE day appointed for the first general meeting of the last International Congress of Hygiene at Geneva was looked forward to as the great occasion of the Congress. M. Pasteur was announced as prepared not only to expound his previously published investigations concerning the modification and protective inoculation of disease-poisons, but to disclose new examples of modification of such poisons by the oxygen of the air, and to prove that we have really reached a general method for the modification of certain poisons, whose application has only to be varied according to the physiological characteristics of the various microbions. It was also known that Dr. Robert Koch would be present as representing the Imperial German Health Board and the German school of investigators, from which criticisms of Pasteur's work had already emanated, criticisms which Pasteur resented in the course of his remarks before the Congress.

The assembled *savants* were disappointed in their expectations. Pasteur, it is true, did present himself in the *rôle* of the "second Jenner," but he adduced nothing new in support of his previous observations, and the two new instances of inoculation with modified virus, namely, the inoculation of rabbits with culture-liquids containing microbions taken from the nasal discharge of horses dead from the so-called typhoid fever of horses, and of rabbits again with culture-liquids of microbions taken from the saliva of a child supposed to have died from hydrophobia; these instances were, for several sufficient reasons, not very satisfactory. Moreover, Koch refused to discuss Pasteur's statements or to support his previous criticisms on the legitimate ground that as each expressed himself but very imperfectly in the other's language, science could derive little benefit from such a debate. He promised, however, to put in print with as little delay as possible whatever he had to say on the subjects of Pasteur's communication, and Pasteur, recognizing the propriety of Koch's course, promised that his reply to such a publication should not be long in appearing. With this the scientific quidnuncs of the Congress were forced to content themselves; but if they lost a sensation it seems as if scientific medicine will make a more important gain.

Koch's arraignment — for it is hardly less — of Pasteur has been published, and is now in our hands. It is a very able and interesting paper, and we give as brief an abstract as possible of the principal points taken up by the writer. Koch thinks Pasteur goes much too fast and too far in proclaiming the discovery and development of a general method of protective inoculation against infectious disease, and denounces the two latest examples cited by Pasteur in favor of such a position not merely as absolutely valueless in that respect, but as admirably exhibiting Pasteur's false methods of investigation, and the way in which they inevitably lead to false conclusions. Koch states the point of view from which he himself regards the investigation of infectious diseases thus: It is not yet proved that all infectious diseases are caused by parasitic micro-organisms, and proof must therefore be found in each separate case of the parasitic nature of a disease. The careful examination of all parts of the body affected by the disease for the presence of parasites, a knowledge of their relative frequency in the affected organs, and of their relation to the tissues, constitutes the first step toward such proof, and all the aids which the microscopical technique of the present day offer are to be brought to bear upon such an examination. Only then can one expect to prove that such micro-organisms are of a pathological nature, and that they are the specific cause of the disease in question. For this purpose they must be propagated in unmixed cultures, and when in this manner they have been freed from all adherent substances of the affected body they are then to be inoculated, if possible, upon the same species of animal as that originally attacked, or at least upon such animals as are well known by unmistakable symptoms to be subject to the disease in question. Such was the procedure pursued by Fehleisen in regard to erysipelas, and such that of Koch himself in isolating his bacillus of tuberculosis. Koch next states how far he believes Pasteur's methods depart from the rules here laid down, and how both the methods and results are unreliable on account of the absence of proper microscopical research, on account of the inoculation of mixed substances, and on account of the selection of unsuitable animals for the experiments. Pasteur not being a physician, Koch thinks it less justifiable to reproach him with his mistaken interpretation of pathological processes and symptoms of disease.

All these sources and kinds of error Koch finds exhibited in Pasteur's reports of his experiments in inoculating rabbits with the nasal secretion of horses dying from so-called typhoid fever and with the saliva of a child dying from hydrophobia. The rabbits died in both cases, Koch thinks, and supports his opinion pretty strongly, not from typhoid fever or from rabies, but from the well-known septicæmia to which they are especially prone, the symptoms and the microbion of which had been previously thoroughly studied and described by Davaine and others. Moreover, the so-called typhoid fever of horses has nothing in common with the typhoid of men, but belongs, according to Schütz, to the group of erysipelatous processes. No characteristic microbion was found in horses to begin

with, the substances for inoculation were not taken from characteristic organs, the materials used for inoculation were not unmixed, the malady from which the rabbits died did not even present any of the general symptoms of typhoid, and rabbits were not the proper animals for the test. Almost the same remarks are applicable to the inoculation of the other rabbits with the saliva from the hydrophobic child, and in regard to this Sternberg has shown how full even the saliva of a healthy person is of various microbions.

In regard to the claim of Pasteur for the discovery and enunciation of a general law for the modification of their poisons and for the protective inoculation of infectious diseases, Koch considers that splenic fever is the only infectious disease which can as yet be properly accepted in favor of such a claim; that even in this one disease the results are thus far limited to sheep, and both the strength of the virus to be used for the first and second inoculations and the length and degree of protection secured are still very uncertain, much more uncertain than Pasteur has acknowledged; that the danger of the inoculation itself for the subject and for other animals and men is increased in direct proportion to the efficacy of the virus employed. As another objection to Pasteur's claim that he has discovered a general law, Koch recalls the fact that it was Toussaint of the Veterinary School at Alfort who first inoculated the modified virus of splenic fever, the virus being modified by the addition of a one per cent. carbolic solution, or by raising the temperature to 55° C. (150° F.); that although Pasteur's method for modifying the virus is much better than Toussaint's, his interpretation of the process by which the modification is brought about is incorrect, for it is not, as his own experiments show, the direct action of oxygen which produces the modification, but the presence of products evolved by the microbions themselves, — an evolution favored by oxygen, by elevation of temperature, and replaced by the presence of carbolic compounds.

In regard to Pasteur's "chicken-cholera," Koch believes no practical use of the modified virus has been made by poultrymen, and thinks that the existence of a specific pathological microbion of such a disease has yet to be demonstrated.

Koch thinks that the general principle of preventive inoculation with artificially modified virus should not be triumphantly proclaimed as established until we have succeeded in modifying and transforming into protective inoculation-material bacteria belonging to diseases of men, of which he thinks we know the bacilli of tuberculosis, of leprosy, of typhoid fever, the micrococci of erysipelas, and the spirochaete of relapsing fever. In none of these diseases, it will be remarked, is one attack protective against a second. Koch acknowledges the modification of the bacillus of splenic fever as an established fact and as a very important step in the right direction, and desires to give Pasteur proper credit for his contributions toward this result, but thinks Pasteur should not make a secret of his processes, and should have more regard for truth and scientific accuracy in his statements, and that all future workers in this department should proceed with greater "objectiveness," and with a more conscientious self-criticism.

Pasteur's reply to this brochure of Koch's will be awaited with much interest and some impatience.

GOVERNOR BUTLER'S LUNACY COMMISSIONER.

The facts that the nine original members of the State Board of Health, Lunacy, and Charity, undertook their multifarious duties with an earnest desire to make the work of the Board as successful as possible; that six gentlemen have resigned their positions, thoroughly satisfied that the several functions cannot be properly attended to by a single unpaid commission, and that at least three highly accomplished men have refused appointments on the Board, believing it to be a mistake, are sufficient to satisfy most people that Governor Butler is not entirely wrong in his criticisms, and that ex-Governor Talbot is not wholly right in his defense of his Board.

It may be that the management of the charities of the State has in general improved, although there is room for much better things in the out-door poor department. It is quite generally acknowledged that the health department has been crippled, and, until the recent appointment of Dr. Walcott, there was for some time no member of the Board who had special training in sanitary science. The committee on lunacy, however, is the weakest part of the combination, as it does not contain a single person who has any real knowledge of insanity and its treatment, and, unlike the health department, has never had a paid executive officer in its employ who possessed such information in the matter of lunacy as to entitle his opinions to respectful consideration in doubtful or difficult cases. In the management of the hospitals, therefore, and in intelligent criticism of the work of the various boards of trustees and medical staffs, as well as in shaping the policy of the State in the treatment of the insane, the Board is of very little use, except in so far as it reviews financial administration. It is fair to say, also, that it does no special harm, and that its treatment of the insane asylums of the State has been marked by a conservative and careful policy. It has done much good in satisfying a certain limited popular clamor for supervision of the insane on the part of the State, although there are already signs in the National Association for the Protection of the Insane and the Prevention of Insanity that the tub thrown to the whale has not proved wholly satisfying. At the same time the Board now in existence has adopted a fair course towards the hospitals, and has, in the four years of its existence, gained an amount of experience, which is likely to prevent it from taking any unwise or unconsidered steps, or from interfering where it is not likely to do good; and we should be very sorry to see an untrained lunacy commission or commissioner going over the same ground again and learning from the beginning even the amount of knowledge

on the subject which is possessed by the Board of Health, Lunacy, and Charity. The experiment, too, might not fully please "the gallery."

The fact is none the less true that we need very much an expert lunacy commission, composed of at least three persons: one lawyer, one physician skilled in the knowledge of insanity and the treatment of the insane, and one gentleman acquainted with financial matters. After the experience of England, France, Scotland, Ireland, and Canada, a single commissioner is not to be thought of for such responsible duties. But in considering this question we must estimate political probabilities, we regret to say, and they are more uncertain than the weather. It is doubtful whether a sufficiently accomplished medical man can be found to take any place which is likely to be offered to him, and, unless such a man can be found, it is folly to attempt any change. In the mean time, we must get on without the much-desired intelligent criticisms of our insane asylums, the classification and treatment of the insane must go ahead in a scrappy, unsatisfactory way, the commitment of persons to asylums is to be attended with many evils that should be remedied, and the whole question of insanity must wait for that broad discussion and able handling for which we shall, in spite of many difficulties, continue to hope.

SIR JAMES PAGET ON SOME RARE AND NEW DISEASES.

THE first "Bradshawe" lecture was delivered in December last by Sir James Paget before the Royal College of Surgeons of England. It is a notable production, not only as the first of a series established on a liberal foundation, and destined undoubtedly to contribute much to medical science, but as presenting in itself a broad and striking view of what may be called the philosophy of medicine. The title selected by the illustrious speaker was "Some Rare and New Diseases," but any of his hearers who expected merely a description of two or three maladies not heretofore laid down in the books must have been amazed at the breadth of the field covered, and the intellectual power displayed under this modest and unassuming title.

A distinction is first drawn by the author between a rare case and a rare disease, the former being usually a common disease which merely presents one or more unusual features. This class is passed by, and attention is directed to rare diseases, and more especially to those which were lately new and have become more frequent; to those, in fact, which represent variations and combinations of morbid conditions obtained from hereditary transmission. He also leaves out of consideration those diseases which are new merely to knowledge, not in fact; citing, however, parenthetically, the typhoid intestinal ulcers preserved unwittingly by John Hunter, as illustrative of the importance of preserving pathological specimens, however we may fail to appreciate their significance, in hopes that future generations may read their interpretation. But apart from these there are certain affections not hard to be discerned, but so well marked, so distressing, and both during life and after death so large and distinct in all their characters, that it seems impossible that unless they were very much rarer formerly than they are now they could have been overlooked. As illustrative examples he cites the joint disease discovered by Charcot in connection with locomotor ataxia, and Paget's own "osteitis deformans." Moreover, he believes that instances of typical gout have become comparatively rare, and that a large number of less acute diseases, to be regarded as forms of incomplete or suppressed gout, are more frequent; such, for instance, as phlebitis of the femoral and external iliac veins.

Sir James Paget makes an *a priori* argument that such changes of type are to be expected, basing it on the ground that the child does not inherit an exact likeness of either parent, nor an exact composite of both; that while it is difficult to maintain the pure "breed" in any of the domesticated species of animals it is not likely that disease should be transmitted with more fixed conformity to type than are normal compositions. "Hybrids and mongrels must be even more common among diseases than among species and varieties." And, finally, that instances of *reversion* to an antecedent type after an interval of one or more generations are as reasonable in the abnormal as in the normal characteristics.

Some of our chronic cases may be, for instance, gout crossed with scrofula, or syphilis mingled with scrofula, rheumatism, or gout. In the author's own words: "It is best to believe that we rarely have to do with a simple and unmixed morbid constitution. There are few worse habits in practice than that of commonly saying of our case 'it is all gout,' and of another it is all scrofula, or all syphilis. We might as well say of any Englishman that he is all Norman, or all Anglo-Saxon, or all Celt. We may, indeed, sometimes see persons who appear to be as types of races unchanged in many centuries, but in practice we had better study every man as, for better for worse, a composite of many ancestors."

A corollary of great practical importance is deducible from these considerations. And that is with regard to the uncertainty of medicines. We are all disappointed frequently in the action of drugs to which accumulated experience has ascribed a value. Bromide of potassium, useful as it often is in epilepsy, not infrequently fails. Arsenic sometimes does and sometimes does not do good in lymphadenoma. Yet the author suggests that "that which some call the fallacy of therapeutics is often the fallacy of diagnosis." *Analytic diagnosis*, with reference to the component elements of each case, is what is needed. Only in proportion as this is attained can therapeutics become a satisfactory science.

Space forbids our noticing many of the other valuable suggestions of this lecture. It closes with a strong plea for the maintenance and use of pathological museums, and has an especial word to say in behalf of the preservation and study of the "bad specimens," which are usually undervalued. The "good,"

that is, typical, specimens have their place in the instruction of beginners; but it is the incomplete, mixed, and transitional examples from which most will be learned of the essential nature of disease. Attention has been confined too strictly to species; varieties are equally deserving of study.

MEDICAL NOTES.

— Chicago during the past year has had fifty-four homicides, but only one capital sentence. Governor Stephens, of Georgia, has, according to the daily papers, since his accession to office released from imprisonment twelve convicted murderers, and commuted the sentence of two others from death to imprisonment.

— The Medical Purveyor of the United States Army at St. Louis makes the startling statement that the accumulations of worthless medicines disposed of from time to time by the government are bought up by dealers and resold again to the trade in outlying towns.

— On November 1, 1881, the Illinois State Board of Health issued a certificate to practice medicine to Heinrich Andreas Lüders on the strength of a diploma from the University of Göttingen in 1866 and letters purporting to be from reputable practitioners. It has since been learned that the true Lüders, after graduating at Göttingen, returned to his native place, Riffenbrück, in the Duchy of Brunswick, where he practiced medicine until his death in November, 1878. The proper name of the individual who personated Lüders in Illinois was Lambrecht; he has previously been a barber. How he obtained the diploma is unknown. He is charged with various instances of malpractice. This is the thirty-first case of an individual falsely swearing to be a graduate of a foreign university detected through the Illinois "Act to Regulate the Practice of Medicine."

— A case of ruptured membrana tympani is reported from Vienna, caused by an ardent lover kissing his inamorata in the ear.

— During the year 1882 there were twenty-nine suicides in Boston, twenty-three being of men.

— A correspondent of the *American Register* spoke in a recent communication of the *Specula* discovered in Pompeii, and now in the wonderful museum at Naples. In a subsequent communication he speaks of the discovery of a more elaborate one in the new excavations. It is what the Italian surgeons describe as a "speculum quadrivalve." The others, already existing in the museum, are respectively "bivalve" and "trivalve." This last, the "quadrivalve," is exquisitely proportioned, and the whole movement is unsurpassed by the most perfected modern surgical instruments. Dr. Jacobelli, of Naples, has made a study of this latest "speculum" discovery, and is to publish an illustrated article on it in the medical journal, the *Morgagni*.

— General Hazen, Chief Signal Officer, has written a long letter to the New York *Tribune*, in which he shows the absurdity of attempting to predict storms a long time in advance, as in the case of the recent prediction by a Canadian named Wiggins, that there would be a terrific storm in March. He closes by saying: "Such statements fill lunatic asylums, and those who make them are enemies of society. Their publication is a pestilence, and it is the duty of all persons who know and prize the truth to denounce them, and enlighten those who might believe them."

— The French medical profession has been having "*un incident*" in connection with the delivery of an address at the opening of the term of the School of Medicine at Nantes. The gentleman deputed by his colleagues to deliver this address took for his topic the work of Claude Bernard, with whom the speaker had lived on intimate terms. In the address he took occasion to speak depreciatingly of contemporary science, and to make some references of a personal and religious bearing which jarred on the feelings of his hearers. Laennec wrote a friendly letter urging him to modify some of the passages and insisting on the withdrawal of others, but the orator refused, claiming his right to say what he thought best. The Faculty appealed to the Minister of Public Instruction, who sustained their objections to the oration on the ground that the orator did not speak in a personal capacity, but as a representative of the body that had selected him, and was therefore bound to respect the sentiments of that body.

NEW YORK.

— The New Jersey City Charity Hospital was formally opened January 4th. It is a plain frame building, one hundred and twenty-five by twenty-eight feet, with two wings, each twelve by eighteen feet. On the first floor is the male ward, which is divided by sliding doors into two apartments, each forty by twenty-eight feet. The reception and operating rooms are on either side of the main entrance, and at the opposite end of the ward are the nurses' quarters and dining rooms for such patients as are able to go to their meals. On the second floor are the female wards, and here the arrangements are essentially the same. There is an elevator to convey patients to this floor, and a balcony, upon which the female wards open, extends all along the west side of the building. The cost of constructing the hospital, which is at present arranged for eighty beds, but has room for a hundred, was $12,000, while $30,000 was paid for the land occupied by it.

— On December 30th and 31st the annual collections for the hospitals of the city were made under the auspices of the Hospital Saturday and Sunday Association, contributions being made in all the churches and synagogues, through the treasurers of trade auxiliaries, through collection boxes placed in drug stores and places of public resort, and by means of other agencies. It is supposed that the amount collected is larger than in any previous year.

— On Thursday, January 4th, the ladies of St. Elizabeth's Guild visited Blackwell's Island, and distributed fruits, jellies, and other delicacies among the sick in Charity Hospital and in the almshouse.

— Dr. Henry B. Sands has been appointed con-

sulting surgeon to the Emigrant's Hospital on Ward's Island in place of Dr. John M. Carnochan.

PHILADELPHIA.

— The following officers for the ensuing year of the College of Physicians were elected at the stated meeting in January: Dr. Alfred Stillé, President; Dr. J. M. Da Costa, Vice-President; Dr. Richard A. Cleemann, Secretary; Charles S. Wurts, Treasurer; I. Hewson Bache, Curator of Museum; James H. Hutchinson, Honorary Librarian; J. Ewing Mears, Recorder; Publication Committee, Drs. J. M. Da Costa, James H. Hutchinson, and Roberts Bartholow; Committee on Directory for Nurses, Drs. W. W. Keen, S. Weir Mitchell, and Albert H. Smith; Library Committee, Drs. L. Lewis, Walter F. Atlee, I. Minis Hays, S. W. Gross, and Morris Longstreth.

— The American Association for the Protection of the Insane, etc., will meet in this city on the 25th inst., the sessions being held at the College of Physicians.

— A. J. Drexel has contributed $5000 to the University of Pennsylvania for the endowment of a free bed in the new wing for chronic diseases, erected as an adjunct to the University Hospital by Henry C. Gibson. The bed will be known by the name of the donor. This makes the fifteenth free bed endowed in the new structure. The new wing will accommodate about one hundred patients, and the full endowment required for its maintenance will not be less than $400,000.

— A new clinic hall of the Woman's Hospital was opened with appropriate ceremonies on the 4th inst. Addresses were made by Bishop Simpson, Prof. Rachel D. Bodley, Dean of the Faculty, Mrs. Rachel C. Bunting, Treasurer of the Board of Managers, Dr. Benjamin B. Wilson, Dr. Anita E. Tyng, and others. The new hall is of brick, two stories in height, with high steps and an ornamental front. It stands on North College Avenue, between the hospital and the college, and faces Girard College on the south. The interior is finished in modern style, and in hard woods throughout. A large amount of room is devoted to an amphitheatre and two stairways. The lecture-room is well lighted by a large skylight and windows on the north side of the building.

— A polyclinic and post-graduate school will be opened shortly in Philadelphia, application having been made for a charter to the present session of the legislature. The following branches will be taught by prominent specialists: Orthopædic and general surgery, by Dr. T. G. Morton; operative and clinical surgery, Dr. Richard J. Levis; diseases of the throat, Dr. J. Solis-Cohen; diseases of the chest, Dr. J. C. Wilson; diseases of the eye, Dr. William Thomson; surgical anatomy, Dr. John B. Roberts; diseases of the ear, Dr. C. H. Burnett; pathology, Dr. Morris Longstreth; nervous diseases, Dr. Charles K. Mills; chemistry, Dr. Henry Leffmann; diseases of the skin, Dr. A. Van Harlingen; diseases of women and children, Dr. E. L. Duer. The Philadelphia Polyclinic and College for Graduates in Medicine, as it will be called, has not yet settled upon its location, but it will be in the centre of the city, probably not far from the Pennsylvania Hospital, permission having been accorded by the managers of this institution to utilize its clinical advantages for the benefit of the prospective classes. The success of this new college is assured by the character of those who are interested in it; they each individually have a well-earned reputation for ability, activity, and application, and for the most part are experienced clinical teachers.

Correspondence.

THE NEW LENOX MALARIA CASE.

MR. EDITOR, — In the report of the "New Lenox Malaria Case," in the JOURNAL of the 28th ult., I find that the testimony of Dr. S. D. Brooks, called in rebuttal by the State, is given somewhat fully, as contradicting my evidence as to the prevalence of malarial disease in the neighborhood of the Water Shop Pond in Springfield. As the evidence of Dr. Brooks was given at a stage of the trial when it could not be replied to either by me or by other witnesses, I think it due to myself to ask you to print the following statement from some of the leading physicians of Springfield.

Respectfully, WM. G. BRECK, M. D.

From personal observation and information from other sources, we have not learned of the existence of malarial disease within half or three quarters of a mile from "Water Shop Pond" in this city during its late prevalence.

S. W. BOWLES, M. D.
A. S. MCLEAN, M. D.
V. L. OWEN, M. D.
S. F. POMEROY, M. D.
M. CALKINS, M. D.
A. R. RICE, M. D.
T. F. BRECK, M. D.
F. W. CHAPIN, M. D.

SPRINGFIELD, MASS., *January* 3, 1883.

Miscellany.

FEMALE EDUCATION IN RELATION TO ITS MENTAL AND PHYSICAL RESULTS.

DR. T. S. CLOUSTON, whose reputation in Great Britain as one of the experienced authorities upon mental and nervous diseases is well established, recently delivered two lectures upon the above subject before the Edinburgh Philosophical Institution, a brief report of the first of which we append. An abstract of the second lecture will be given in the next issue. Dr. Clouston's views are not new, and for this very reason a certain class in our communities may refuse to read them, but they are forcibly expressed, and derive weight from Dr. Clouston's authority.

There were a good many reasons, the lecturer said, why physicians and physiologists should have opinions about the education of youth rather different from those held by the professional educators; and he proceeded to show that the former viewed the human being as a unit, with the body and mind inseparable, and that the practical aims of modern medicine, founded on this enlarged study of man, were getting more to

be concentrated on measures for the prevention of diseases, rather than on measures merely for their cure after they had arisen. Now, to prevent disease one must control the conditions of life, especially in youth, when the human being is most amenable to influence for good and evil that affect the whole future life. The process and the method of education most undoubtedly influenced health very strongly. Vital energy, which was available for many purposes, should not be appropriated for one; and if in a girl they applied to education the energy which ought to go towards growth, and towards the strengthening of the body, they would produce a small and unhealthy specimen of humanity. At the different periods of life nature used her energy in different ways. In babyhood it was chiefly in body growth; in girlhood, partly growth and partly brain development; while in adolescence nature's effort was to obtain a full development of the various functions. The period of adolescence was not one of production, but of acquisition, and they had to see that it was acquisition all around, and not in one single direction only. If the original constitution derived from ancestry has been good, if the conditions in childhood have been favorable, if education has been right, and the development of the whole being in all her faculties equal and harmonious after nature's plan, then they must have a woman in perfect health, which meant happiness, with the full capacity for work, for resisting evil influences, and for living her allotted time. In pointing out that one might use up by undue pressure at one time of life the power that ought to have been spread over a much longer period, he remarked that the physician must look at the human being from the cradle to the grave, and not one portion only, as, unfortunately, the educationist must necessarily do, having nothing to do with life after the period of education was over. He (Dr. Clouston) would have the educator's reputation partly to depend, not on what he turned out at eighteen, but on the result at forty, fifty, or sixty. If it had helped life to be healthy, successful, happy, and long, then education had been good; if unnecessary disease, unhappiness, unhealth at any period of life had been the result, then it had been bad. One generation, he submitted, might by living at high pressure exhaust its share of energies, and might thus draw a bill on posterity without transmitting to the next generation enough to pay it. He believed many of them were now having the benefit of the calm, unexciting, lazy lives of our forefathers of last generation. Proceeding to speak of some of the bad results which he thought were caused by the present system of the education of young women, he referred to the physical and mental changes which accompanied the transformation from girlhood to womanhood, and strongly urged the importance of the whole brain and the whole body coming to maturity, pointing out that the developing process stopped at adolescence. Whatever was done then, or left undone, was final. Who in his senses, he asked, would deny that it was far better for nineteen women out of twenty to begin life healthy than well educated? Alluding to the danger of developing hereditary nervous diseases, he asked why should they spoil a good mother by making her an ordinary grammarian? It had been said that most great men had had mothers with strong minds, but he believed that few of them had highly educated mothers. There was usually an innate force and good development of mind and body in the mothers of such men, and they had usually led quiet, uneventful, and unexciting lives. One great argument for higher education was that it made woman a fitter companion for highly-educated men; but he held this view to be erroneous; and, in conclusion, illustrated his contention by pointing to the ideal pictures of young women drawn by Tennyson, Shakespeare, George Eliot, and Thackeray.

EUCALYPTUS TREES AT ROME.

A WRITER in the *Journal of Forestry* speaks in some detail of the experiment of planting eucalyptus trees by the Italian government. The discovery of its anti-malarial influence was made about fourteen years ago, when a few Trappist monks — mostly French — established themselves at Trois Fontaines, about one and a half (English) miles outside the Porta di S. Paolo, at Rome. The spot was highly malarious, and the monks were at first compelled to return to the city at night to sleep. In 1870 they made the experiment of sowing seeds of eucalyptus. The seed was dear, the fathers were poor, and had no knowledge of the management required. But the plants came up, and were set out around the building, and by the time the surviving seedlings had attained their fifth year the site was sufficiently improved in its sanitary conditions to enable the monks to sleep in the building unharmed. Previously, although they absented themselves at night, the malaria had carried off twelve of their small community. These results having been pressed on the notice of the Italian government, to whom the mortality among the railway employees in the Campagna has been for some time a matter of grave concern, an arrangement was concluded, about three years ago, for the establishment of an experimental farm at Trois Fontaines, under the management of the Trappists, for the reclamation and sanitation of certain adjacent lands with the aid of convict labor. The results of the experiment appear to have been most satisfactory. The success attending the planting of the young eucalyptus trees is in marked contrast with the failures in other parts of the Campagna and in private gardens within the city. The agreement with the government stipulated that 12,500 eucalypti shall be planted annually, and this number was exceeded in 1880 and 1881. Most of the trees are doing well, and there appears to be no question as to the fact of their anti-malarial influence, whatever may be the true proximate cause. The country round about Trois Fontaines is flat, with low undulations. The soil is pozzuolana, interstratified with clay, and here and there capped with patches of basalt or with a hard, stony crust, called *cappelaccio*, which is shattered into small fragments with dynamite and dug in. Water is found at depths of eighteen inches to three feet. The eucalyptus makes large demands on the soil, and no data exist as to the amount of spacing requisite to ensure successful planting. The plan has therefore been adopted of allowing nine hundred trees to the hectare, or about three hundred and sixty to the acre, which appears to answer well. The seedlings are planted out in two-feet trenches, disposed in lines. The seed is sown in light, open frames, in soil of the kind in which the trees are eventually to grow. When two to four inches high the seedlings are set out at distances of four inches apart each way, in small boxes holding forty plants each. In these they are

housed under glass during the winter. This protection is not indispensable except in unusually severe weather, but the plants are better for being spared. They are set out in trenches when the frosts are over. A remarkable fact is the immense amount of water which these trees absorb from the ground. It is noted that maize and other cereals grow well when planted between the trenches of eucalyptus, whereas the soil previously gave no good results to this or any other crop.

AUTOGENESIS OF CYSTICERCI.

A CASE was recently reported before the Société Médicale des Hôpitaux of Paris[1] of a man having fifteen or twenty cysticerci (of which one, excised for purposes of diagnosis, revealed the characteristic hooklets of the parasite). The peculiarity of the case consisted in the fact that the individual had passed links of tapeworm about a month previous to the appearance of the first cyst, and two months after this had gotten rid of the whole of a tænia solium. The reporter of the case believed that the person had become affected with the cysts from his own tænia without the reception of the ova in another animal, which is ordinarily supposed to be necessary to the complete cycle of development. Authorities are cited to show that antiperistalsis, vomiting, etc., may convey the proglottides of the parasite from the intestine into the stomach, and as the action of gastric juice is alone necessary for the liberation of the ova, the individual thus may ingest accidentally the ova expelled by himself. That the complemental portion of the cycle may occur without the intervention of the swine or any other animal is demonstrated by an enthusiastic student of helminthology, who swallowed four cysts taken from a human cadaver, and in three months and two days first noticed the appearance of proglottides in his stools, which were demonstrated later to belong to the tænia solium.

INTESTINAL OBSTRUCTION; MANUAL EXPLORATION OF ASCENDING COLON.

A CASE in which very active treatment for stoppage of the bowels was applied not only without injury to the patient but with apparently favorable effects on the abnormal condition, is described in the *Practitioner* by Dr. Hunter, of Peru. The patient was a muleteer, and was suffering from the usual symptoms of intestinal stoppage, with hiccough, vomiting, and great tympanites. Pretty active medicinal treatment having been given with no good effect, and only temporary relief to the tympanites having been afforded by puncture of the intestine, manual dilatation of the stricture was resorted to after this manner: —

When the patient was well under the influence of chloroform he was placed on his left side, the nates drawn to the side of the bed, and the knees bent. The tube and catheter were introduced into the rectum, but without result. When the hand (length eight inches) had been fairly introduced, it was found to be comparatively free in a vaulted cavity without any apparent exit. Upon careful examination a slight projection was felt, something like a soft but not prominent os uteri, with a central depression. Into this central depression first one finger and then another were insinuated until all the fingers were introduced in a conical form. Slowly dilating and advancing, the hand found itself free in a large roomy cavity, and in contact with a soft pultaceous substance; no hard lumps of any kind were felt. From the tip of the middle finger to the point where the arm was grasped by the anus measured sixteen inches. The long tube was now passed along the front of the arm and hollow of the hand: immediately there began to escape a dark-green semi-fluid and flatus. The hand being withdrawn, the fluid continued escaping but slowly, until warm water was injected by the tube. The effect of this was most satisfactory — more and more of the always dark-green fluid and gas escaping, partly by the tube, and partly by the side of the tube. Considering the excessive tympanites that had existed it was astonishing to see the very large amount of this dark-green fluid which was ejected. No scybala were expelled. The patient, as he was recovering from the chloroform, made voluntary expulsive efforts, increasing the amount ejected. The abdomen being now soft and flat, and the patient expressing himself as feeling better, the tube was withdrawn. The patient never complained of any pain following this operation, — only of a little soreness about the anus, — and in a fortnight was well.

As a suggestive contrast to this case, we may mention from the *Revue de Chirurgie* an article by M. Quénu detailing six cases of spontaneous rupture of the rectum, most of them in cases of old prolapse and usually accompanying an effort, as defecation, vomiting, and once the patient's straining during surgical reduction of a prolapse.

The symptoms are of course very severe, as the accident is usually accompanied by protrusion of the intestine, forming a large mass between the thighs which quickly becomes congested. To elucidate the pathogeny of this accident, M. Quénu has made experiments to ascertain the resistance which the rectum offers to a bursting force. Having stitched up the anus, he pumped air into the rectum, measuring the pressure. He found that the rectum would bear, without giving way, a pressure equal to that of a column of mercury sixty centimetres high (about twenty-three inches). When the pressure passed that of seventy centimetres, the peritoneal coat began to crack, and the other coats followed. We may add, that Schatz has shown that the ordinary pressure within the rectum is equal to that of a column of mercury from twenty-five to thirty centimetres high, and that it sometimes rises to that of fifty centimetres of mercury.

TREATMENT OF PUERPERAL MASTITIS BY IODIDE OF LEAD OINTMENT.

IN the *American Journal of Obstetrics*, Dr. Thos. T. Gaunt expresses his disappointment at the ill success of belladonna in checking the secretion of milk, but reports good effects from iodide of lead. He says: —

"The breast being thoroughly dried and perfectly cleansed, we smear its surface with the officinal ointment of the iodide of lead, and then gently rub it in until a considerable quantity is absorbed. Soak a piece of sheet-lint, of a size sufficient to cover the breast, in the following solution: Acetate of lead, from ℥ij to ℥ss to the pint, of a one-to-four solution of alcohol.

[1] L'Union Médicale, December 12, 1882.

If we desire a more elegant preparation, eau de cologne may be substituted. If there be much pain it is often well to apply an ice-bladder upon the sheet-lint covering the breast. The lint should be frequently dipped in the lead lotion. The following phenomena will present themselves: First, a cessation of pain, fullness and uneasy feeling of distention, which is so annoying. It is common for the patient, who has been exhausted by pain and consequent loss of sleep, to fall into a refreshing slumber even after the application is made. In the course of three or four hours the breasts may be completely emptied by an experienced hand. The ointment should be used as a lubricant during the manipulation. By applying the iodide freely twice or thrice, daily, the secretion will be gone in less than one week, as a rule. The pivotal point in the treatment is the use of this ointment; the evaporating lotion and cold being only adjuncts. I have proved by repeated trials that, when applied alone, it is capable of exerting an absolute control over the secretion. I believe we here invoke a specific action from the lead iodide. A point of considerable moment is the partial anæsthesia it is capable of inducing, which thus enables us to empty the glands, where before even slight pressure was badly borne. Its action without doubt extends to the epithelial cells and inhibits their secretory activity, as is seen in its action, in cases like the above, in causing the drying up of the secretion."

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 6, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	618	221	18.38	19.09	7.76	1.78	—
Philadelphia	846,984	409	130	17.85	9.05	10.51	3.18	.98
Brooklyn	566,689	270	101	22.57	18.13	10.36	7.77	—
Chicago	503,304	218	103	30.77	6.44	10.99	5.41	9.16
Boston	362,535	184	58	16.30	22.28	11.41	1.63	—
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	241	87	47.98	4.15	9.54	2.07	32.77
Cincinnati	255,708	124	43	17.05	19.49	3.25	5.68	—
New Orleans	216,140	163	27	17.68	6.74	.61	1.22	6.74
District of Columbia	177,638	74	23	1.35	25.65	—	1.35	—
Pittsburg	156,381	82	23	26.84	10.98	7.32	—	1.22
Buffalo	155,137	58	18	36.20	12.07	3.45	13.79	—
Milwaukee	115,578	42	21	16.66	7.52	4.76	2.38	—
Providence	104,857	40	13	22.50	5.00	5.00	2.50	—
New Haven	62,882	25	10	12.00	12.00	8.00	—	—
Charleston	49,999	30	11	10.00	6.66	—	—	—
Nashville	43,461	34	14	14.71	—	5.88	—	2.94
Lowell	59,485	24	9	8.32	20.80	4.16	4.16	—
Worcester	58,295	16	12	12.50	25.00	6.25	6.25	—
Cambridge	52,740	22	4	4.54	18.18	4.54	—	—
Fall River	49,006	24	9	29.12	20.80	8.32	—	—
Lawrence	39,178	16	7	6.25	6.25	6.25	—	—
Lynn	38,284	10	4	10.00	10.00	—	—	—
Springfield	33,340	11	3	9.09	—	—	—	—
Salem	27,598	7	1	—	—	—	—	—
New Bedford	26,875	—	—	—	—	—	—	—
Somerville	24,985	10	3	20.00	10.00	10.00	—	—
Holyoke	21,851	7	3	14.28	14.28	14.28	—	—
Chelsea	21,785	8	2	12.50	12.50	12.50	—	—
Taunton	21,213	6	2	16.66	—	16.66	—	—
Gloucester	19,329	2	2	50.00	—	50.00	—	—
Haverhill	18,475	2	0	—	—	—	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	0	0	—	—	—	—	—
Newburyport	13,537	1	0	—	—	—	—	—
Fitchburg	12,405	5	0	—	—	—	—	—
Malden	12,017	4	0	25.00	—	—	—	—
Eighteen Massachusetts towns	133,442	33	6	12.12	6.06	12.12	—	—

Deaths reported 2820 (no report from St. Louis): under five years of age 970: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 602, consumption 386, lung diseases 379, diphtheria and croup 221, small-pox 98, scarlet fever 90, typhoid fever 50, diarrhœal diseases 32, cerebro-spinal meningitis 27, measles 23, whooping-cough 21, malarial fevers 17, erysipelas 13, puerperal fever 10. From *typhoid fever*, Pittsburg 10, Philadelphia seven, Cincinnati six, New York, Chicago, and Providence four each, Baltimore three, Boston, Buffalo, Charleston, and Fall River two each, Milwaukee, Springfield, Somerville, and Malden one each. From *diarrhœal diseases*, New York and New Orleans seven each, Chicago six, Brooklyn four, Buffalo and Fall River two each, Baltimore, Pittsburg, Providence, and Nashville one each. From *cerebro-spinal meningitis*, New York nine, Chicago six, Buffalo three, Philadelphia and New Orleans two each, Brooklyn, Boston, Pittsburg, Milwaukee, and Fall River one each. From *measles*, New York 16, Philadelphia two, Chicago, Boston, Baltimore, Worcester, and Lynn one each. From *whooping-cough*, New York eight, Pittsburgh three, Cincinnati two, Philadelphia, Brooklyn, Chicago, Boston, Baltimore, Milwaukee, and Nashville one each. From *malarial fevers*, New York six, Brooklyn and New Orleans five each, Cincinnati one. From *erysipelas*, New York and Buffalo three each, Milwaukee two, Philadelphia, Brooklyn, Chicago, Cincinnati, and Charleston one each. From *puerperal fever*, Chicago six, New York, Boston, New Orleans, and Buffalo one each.

Five cases of small-pox were reported in Cincinnati, Pitts-

burg two; diphtheria 57, scarlet fever 33, typhoid fever 11, in Boston; scarlet fever 18, and diphtheria three in Milwaukee.

In 35 cities and towns of Massachusetts, with a population of 1,008,240 (population of the State 1,783,086), the total death-vate for the week was 19.84 against 23.36 and 20.75, for the prerious two weeks.

In the 28 English towns, with an estimated population of 8,469,571, for the week ending December 23d, the death-rate was 27.6. Deaths reported 4480: acute diseases of the respiratory organs (London) 633, measles 110, whooping-cough 106, scarlet fever 100, fever 85, diarrhœa 47, diphtheria 24, small-pox (London three, Newcastle two, Wolverhampton one) six. The death-rates ranged from Derby 20 to Liverpool 40.1; Brighton 21.9; Birmingham 23.1; Nottingham 24; Birkenhead 25.3; Sheffield 27.5; Sunderland 28.5; Leeds 30.7; Newcastle-on-Tyne 32.9; Huddersfield 36.9.

For the week ending December 16th, in 170 German cities and towns, with an estimated population of 8,457,136, the death-rate was 24.2. Deaths reported 3934: under five years of age 1745; consumption 529, acute diseases of the respiratory organs 467, diphtheria and croup 184, scarlet fever 84, measles and rötheln 65, typhoid fever 52, whooping-cough 48, small-pox (Mannheim and Prenzlau two each) four. The death-rates ranged from 34.7 in Posen to 11.1 in Wiesbaden; Königsberg 28; Breslau 26.7; Munich 29.7; Dresden 26.8; Berlin 25.7; Leipzig 21.3; Hamburg 26.7; Cologne 19.8; Frankfort a. M. 16; Strasburg 22.2.

For the week ending December 23d, in the Swiss towns, population 494,390, there were 31 deaths from lung diseases, consumption 24, diphtheria and croup 10, diarrhœal diseases eight, erysipelas one, typhoid fever one. The death-rates were, at Geneva 24.7; Zurich 16.2; Basle 18.7; Berne 19.5.

The meteorological record for the week ending January 6th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date. December, 1882. January, 1883.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 31	30.096	36	42	32	69	65	69	68	NW	SW	W	6	11	9	O	O	C	—	—
Mon., 1	30.248	33	40	27	78	59	78	72	NW	W	W	6	7	4	F	C	O	—	—
Tues., 2	30.308	29	39	19	67	63	70	67	W	W	N	11	15	11	O	C	C	—	—
Wed., 3	30.245	31	39	14	53	73	69	65	NE	SW	SW	3	10	11	C	O	C	—	—
Thurs., 4	30.428	20	37	7	51	60	80	64	NW	NW	NW	13	16	10	C	F	C	—	—
Fri., 5	30.389	13	20	4	58	80	83	74	NW	NW	NW	11	13	11	S	S	S	—	—
Sat., 6	30.164	16	23	10	83	93	100	92	NW	NW	NW	12	10	14	S	S	S	—	—
Means, the week.	30.268	25						72										48	.57[2]

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening. [2] Melted snow.

RESOLUTIONS OF THE HARVARD UNIVERSITY MEDICAL SCHOOL ON THE RESIGNATIONS OF PROFESSORS HOLMES AND BIGELOW.

At the meeting of the Medical Faculty, on the 6th inst., the following record was made: —

Resolved, That the resignation of Professor Oliver Wendell Holmes is received by this Faculty with no ordinary feelings of regret; not only on account of the loss of a gifted teacher who for more than a generation has so faithfully and brilliantly filled the chair of anatomy, but because of the severing of those close personal relations in which as colleagues we have been so long and so pleasantly associated.

Resolved, That we recognize the great loss which this Faculty has sustained in the retirement from the chair of surgery of Professor Henry J. Bigelow, whose keen observation, accurate research, and rare genius in devising new and important methods of operative procedure have done so much to render this School conspicuous, and to make American surgery illustrious throughout the world.

INTERNATIONAL MEDICAL CONGRESS.

COPENHAGEN, *December*, 1882.

SIR, — According to the desire expressed by the International Medical Congress at its seventh session, in London, 1881, and in consequence of later discussions on this subject, it has been resolved that the eighth session of the Congress shall be held in Copenhagen.

Especially in order to prevent collisions with other medical congresses we beg to request that you will, even now, in your esteemed journal draw attention to the fact that the eighth session of the International Medical Congress will take place in Copenhagen during the days from the 10th to the 16th of August, 1884.

We are, sir, your faithful servants,

P. L. PANUM, C. LANGE, *Secretary-General.*

President of the Organizing Committee of the Congress.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 5, 1883, TO JANUARY 12, 1883.

SKINNER, JOHN O., captain and assistant surgeon. Granted leave of absence for one month. Paragraph 2, S. O. 5, A. G. O., January 6, 1883.

WOOD, MARSHALL W., captain and assistant surgeon. Granted leave of absence for one month. Paragraph 3, S. O. 4, Department of the East, January 8, 1883.

JOHNSON, R. W., first lieutenant and assistant surgeon. Granted leave of absence for one month. Paragraph 2, S. O. 4, Department of Dakota, January 5, 1883.

MUNDAY, BENJAMIN, first lieutenant and assistant surgeon. Assigned to duty at Fort Klamath, Oregon. Paragraph 3, S. O. 195, Department of the Columbia, December 29, 1882.

MIDDLESEX NORTH DISTRICT MEDICAL SOCIETY. — The quarterly meeting of the Middlesex North District Medical Society will be held at the St. Charles Hotel in Lowell, Wednesday, the 31st inst., at four o'clock P. M. A paper prepared by Dr. William H. Lathrop, of Tewksbury, on Incipient Mental Disease, will be read by the author. A paper on Venesection in the Treatment of Disease will be read by its author, Dr. Harvey Knight, of Lowell. GEORGE C. OSGOOD, *Secretary.*

BOOKS AND PAMPHLETS RECEIVED. — Legal Medicine. Vol. II. By Charles Meymott Tidy, M. B., F. C. S., late Deputy Medical Officer of Health and Public Analyst for the City of London. New York: William Wood & Co. 1882. Wood's Library of Standard Medical Authors.

The Physician's Pocket Manual and Year-Book. By G. Lowell Austin, M. D. Boston.

Eighth Annual Report of the Boston Woman's Christian Temperance Union for the Year ending October, 1882. Boston.

Original Articles.

A CASE OF PARALYTIC DISLOCATION OF THE HIP-JOINT, AND OTHER CASES OF INFANTILE PARALYSIS, WITH REMARKS ON THE SURGICAL TREATMENT OF INFANTILE PARALYSIS.[1]

BY E. H. BRADFORD, M. D.

Case I. M., a girl eighteen months old, referred to me by Dr. Emerson, of Concord, presented the following unusual deformity: The right thigh was flexed and abducted so that it was at right angles with the trunk; though movable at the hip-joint it could not be adducted or brought in a line parallel with the other. The limb was cold to the touch, and there was little or no power of active motion of the thigh, except through the action of the glutei muscles; the child, however, could move its foot slightly. On passive motion the limb could be moved freely outward, but could not be adducted, or but slightly. The adductors of the thigh were flaccid. The glutei muscles, and the tensor vaginæ femoris, were not paralyzed. In the groin, on the ramus of the pubes, half way between the symphysis pubis and the anterior superior spine, a rounded mass was to be felt, which on rotating the thigh was found to be the head of the femur moving in a false socket, to be felt on the ramus. It played in this false acetabulum with some freedom, and could not be displaced by ordinary force.

According to the mother's story this was first noticed at the time the child was three months old, no cause being assigned. The patient was, of course, unable to stand, but was able to hitch about on its buttocks, using its arms as a propelling power. The left leg below the knee was less firm to the touch than is normal.

The child was etherized, and, with the assistance of Dr. T. Dwight, the head of the femur dislocated from its articulation, and the limb brought into a position parallel with the other. Some force was required to effect the luxation. No remains of a true acetabulum could be found, and the limb was therefore placed in as nearly a normal position as could be determined. In order to secure the thigh in the corrected position a plaster-of-Paris bandage was applied around the whole limb and the pelvis. This was worn eight weeks, after which a steel appliance was used designed to prevent the limb from being flexed and abducted; after two weeks the child was removed home.

At the present time, two years later, the patient's condition is as follows: The limbs are parallel and of equal length; the trochanter on the right (the affected) side is in the proper position relatively to the Nélaton line; the head of the femur is in its normal place, and the limb can be rotated freely, adducted, abducted, and flexed. The child is able to flex the thigh, using the glutei and the tensor vaginæ femoris; but the adductors and rectus are absolutely powerless and flaccid; the child can move the foot well and extend the leg from the knee feebly. The tibiales on the left foot are weak, and the foot is in a position of slight valgus. The right thigh is somewhat atrophied, but the limbs are of equal length. When the apparatus is applied the child can walk about the house. When out-of-doors it needs the help of the parent's hand or a stick as a security against falling, but without the apparatus is unable to stand.[2]

Case II. H., a boy five years old, presented himself for treatment, 1877, with the following history: A year before, the child had a slight attack of sore throat, which did not confine him to bed. The boy on the second day fell while standing, his right knee giving way under him. He was obliged to use a crutch, and never regained power in his limb.

His condition, on examination, was as follows: There was complete paralysis of the extensors of the thigh and leg. The knee was contracted, the foot was in the position of an equinus. On the application of apparatus the limb became gradually straighter and the equinus position was partially corrected. The boy became able to walk without crutches and to play ball, run, climb fences, etc. Without the apparatus the limb is entirely helpless. Five years later the condition remained the same, but the left limb is two inches shorter than the other.

Case III. F., a girl five years old, presented herself in 1877 for treatment, with the following history: Four years before the child was sick for two months with "brain fever" and "inflammation of the bowels," and was found after this to have lost all her "strength," and could neither sit nor stand up, or move her hands or legs; three months later she began to use her arms. She was seen by many physicians, and was treated at the Massachusetts General Hospital by Dr. J. J. Putnam, with marked benefit. She was afterwards under the care of an irregular practitioner using a "vacuum cure," and was subsequently treated by many empirics.

Her condition was as follows: The patient could sit upright with difficulty. The arms were strong and they and the trunk were well developed, with the exception of the muscles of the back, which seemed smaller than normal. The legs appeared to be of normal length, but were much atrophied. There was marked contraction of the ham-string tendons of the left leg and of both tendines Achillis. The right foot was in the position of equino varus, and the left of simple valgus. The child leaning its body upon a chair was able to bear a slight amount of weight upon the right limb, but the left doubled up under any weight. There was no power of motion in the left limb except at the hip-joint, and no power over the right foot, and but little of the right knee. The patient could move about only by pushing herself on the floor with her arms and hands. There had been no improvement in the past two years, and all that the parents hoped for was that she might be able to stand at some time with the help of crutches.

Appliances were used, made in such a way that the knee of the left limb could not bend forward, and so that the feet were kept from turning inwards or outwards.

After six months the girl was able to stand, with crutches, when the appliances were used, and in a year to stand without the help of crutches. If the appliances were removed the child was helpless as before. In the course of time the patient improved a great deal in general strength, particularly in the muscles of the back. At the present time, five years after she came under my observation, her condition is as follows:

[1] Read before the Surgical Section of the Suffolk District Med Society, October 22, 1882.

[2] Reclus (Des Luxations Paralytiques du Femur, Revue Mensuelle de Med. and Chir., 1878) describes somewhat similar cases of dorsal dislocation.

Wearing the apparatus, she is able to walk about the house without the aid of a cane or crutch. When out-of-doors she uses a cane; and with this she is able to walk a mile. The patient can stand on the right limb when no apparatus is applied, but still needs a foot support to correct the tendency to talipes equino varus. The left limb is entirely useless without an apparatus, and the child helpless. Both legs have grown in length, but not in circumference to any noticeable degree.

CASE IV. M. A. C., a girl six years old, was seized, September, 1877, with a febrile attack accompanied by pain and stiffness in the lower limbs, with loss of power ending in paralysis of motion of both legs. For a time enemata were necessary to move her bowels, and a catheter was used to empty her bladder. A year later the child presented herself for treatment in a condition of perfect general health, but with absolute uselessness of her lower extremities. She was unable to stand even with crutches, and dragged herself about upon the floor. On examination her limbs were found cold and atrophied, but without loss of sensation. There was pronounced equino valgus of the left foot, and equino varus of the right. The muscles on the anterior surface of the left thigh and leg, and of the anterior surface of the right thigh, were paralyzed. The legs were contracted at the knees to a slight degree. The deformities of the feet and knees were corrected by the use of apparatus, and after wearing appliances designed to prevent the knees from dropping forward, the girl became able to walk, first with the help of crutches, afterwards without them. In the course of time the right limb developed so that no artificial support was necessary except for the foot, and the patient became able to stand upon that limb without help; she could also walk with crutches when not wearing her appliances, but no weight could be borne upon the left limb unless supported. This is her condition at present (1882). There is, however, a tendency of the feet to relapse to a degree to the condition of valgus and varus. In the hope that tenotomy might correct this tendency, in 1880 the tendines Achillis were divided, but the tendency to relapse remains the same unless corrected by the constant use of appliances.

CASE V. W., a girl eleven years old, a companion case to the above, differing in that the paralysis had persisted longer (ten years), and that at the hamstring tendons were contracted, right-angled contraction at both knees being the chief deformities. The girl crawled about upon her hands and knees. The contractions were overcome without tenotomy, and the child became able to walk with crutches and an apparatus, and to a limited extent without crutches. Three years later the patient died of typhoid fever. She had outgrown her apparatus, having been removed from observation during that time, and recontraction at the knees had taken place, so that at the time of death her limbs were as much deformed as before.

CASE VI. G., girl, four years old, with paralysis of the extensors of the left thigh and leg and of the right leg, contraction of the left knee, an equino varus of the left, and equino valgus of the right, foot. The paralysis had appeared when the child was one year old, and the resulting deformity had been corrected by apparatus, but on the neglect of apparatus relapse had occurred.

The correction of the contracted knee in this case was readily effected by bandaging the limb to a straight posterior support. The contraction in one foot was corrected by tenotomy, and the other in comparison by gradual stretching, and the child furnished with apparatus enabling her to walk, which she learned to do without other support than that furnished by the appliance.

CASE VII. M., girl, fifteen years old, referred to me by the kindness of Dr. Douglas Graham. Two years before the patient, without known cause, was attacked suddenly with paralysis of both lower extremities. But little improvement followed, and finally her limbs became contracted at the knee-joint. Massage was employed by Dr. Graham, and some improvement followed. Right-angled contraction, however, at both knees remained, and equinus of both feet. The object of treatment was, if possible, to so far straighten the limbs that the patient should be able to stand with the help of crutches.

In this case paralysis of both quadriceps extensor muscles was present, the flexors of both feet, and the adductors of the thigh; the glutei muscles and the lower spinal muscles were also atrophied.

As the patient was a nervously organized girl, it was decided to attempt to correct the deformity without tenotomy, and under appliances for that purpose the contractions were overcome in four weeks.

The tendines Achillis were contracted and stretched after the contraction at the knees had been overcome. At the present time (six months later) there has been no gain in the power of locomotion, the limbs have remained straight, and the patient, using apparatus and crutches, can stand if leaning against the wall, but cannot walk, being unable to balance herself even with crutches, owing to the weakness of the glutei.

CASE VIII. R., healthy boy, fifteen years old, was paralyzed when a child; recovered to a certain extent, leaving him with a partial paralysis of the quadriceps extensor muscle of the right limb, which was two inches shorter than the left. There is a paralytic talipes calcaneus of the right foot, and slight varus of the left. The patient in walking places his hand upon the right thigh to prevent its dropping forward. No contractions were present.

An apparatus was applied which prevented the knee from dropping forward, and enabled the patient to walk much more readily. With this on, it is not necessary for him to hold his knee with his hand. Wearing the apparatus the patient has walked ten miles, but without it he cannot without fatigue go farther than half a mile.

It will be seen from the above cases that contractions can be overcome readily and limbs made straight, and that sometimes by means of appliances the patients are able to walk without crutches and sometimes they are able to walk with crutches, which before was impossible. In certain cases appliances are of no use and sometimes of slight use.

The amount of benefit obtained by treatment is not, however, to be measured simply by the correction of the deformity or increase in the power of the limb. Children condemned to a life of paralysis and distortion, with the floor as their only playground, dragging themselves about by their arms, dependent for a change from room to room upon the assistance of an attendant, practically life prisoners to a corner of the chamber, with a wheel-chair as the limit of freedom, are among the most pitiable objects the physician meets.

An almost incalculable boon is conferred if we are merely able to put them in a position to move about with crutches. This can be done in a large number of these cases, as can be seen by the foregoing histories.

The natural history of this disease has been well sketched in a recent lecture by Charcot,[1] which deserves quotation: "The attack is sudden, frequently without prodromata; usually, especially in children, a slight fever (sometimes of several days' duration) precedes the paralysis. Pain during the first few days may be present, but this is not an essential part of the disease, and indicates a diffusion of the medullary irritation. . . . This occurs more frequently in adults. The paralysis attains its greatest intensity in a few hours, and rarely progresses beyond the first day. There is a lowering of the temperature and a violet tinge in the paralyzed limb. The paralysis generally retrogrades, but usually certain muscles or certain fibres of certain muscles remain disabled. The large cells (in the anterior cornua) are the points primarily attacked, but the inflammation may extend to the neuroglia and the vicinity, and foci of red softening may develop in infantile paralysis, but not in progressive muscular atrophy. The faradic irritability ceases in all the paralyzed muscles in a few days after the attack, but the galvanic excitability lost in the muscles destined to be permanently destroyed will increase in muscles which regain their power, and subsequently the faradic irritability will reappear."

Sensation is not affected, and although atrophy is always present and the growth of the limb is diminished by the paralysis and the circulation is enfeebled, as manifested by a coldness of the extremities, there appears to be no diminution in the power of repair in the non-paralyzed muscles of limbs, for recovery after tenotomy is as speedy as in a normal limb. Atrophy does not affect the fatty tissue, and the limb may, in patients inclined to flesh, be round and plump, although cold and flabby to the touch.

The gain in power after the original attack begins usually in about two weeks, and continues in a period of from six months to a year, after which no gain in the paralyzed muscles can be expected, although the non-paralyzed muscles enfeebled by disease may become stronger, increasing the usefulness of the affected limb. Sometimes complete recovery after extensive paralysis takes place.[2] The improvement is sometimes gradual to a wearisome degree, as is illustrated by the following: —

Case IX. A. D., a healthy boy, was, when two years old, attacked with complete paralysis of all the extremities, with the exception that the fingers and toes could be moved. The onset was sudden, with, as a prodroma, slight feverishness for a day or two. Pain lasted for a few days. No improvement followed for three weeks, when the left arm gained somewhat. After six months there was no improvement. His condition a year later was that of complete loss of motion in the right arm and both legs, complete loss of power in the muscles of the back and abdomen, so that if an attempt were made to make the patient sit up the thorax would fall forward on to the abdomen, as in a cadaver. The patient could not support the weight of the head, but could move the head when recumbent. Some motion of the fingers of the right hand and slight motion of the toes remained. There were slight contractions of the gastrocnemii. The child's general condition was good.[3]

Case X. It has been said that bed-sores never occur, but in one patient, a child three years old, with paralysis of both lower extremities, having the clinical history and characteristics of infantile paralysis, a large slough formed from pressure over the coccyx. The slough extended until the bones of the coccyx suppurated away. Death subsequently followed from exhaustion. The surroundings of the child were such that cleanliness could not be attended to, and he remained in one position during the whole day.

The muscles of the lower extremity are more frequently affected with a permanent paralysis than those of the upper; and all the muscles of the lower extremity may be involved, but this rarely occurs at the same time, although one such case was seen by Duchenne. The anterior muscles are those usually destroyed (that is, the extensor communis, the tibiales, and the peronei). The gastrocnemius, however, is sometimes paralyzed. Permanent paralysis of both arms has never been seen except in one case. If the upper extremity is affected the deltoid muscle rarely escapes. The muscles of the foot proper commonly retain their power.

The fact that the anterior groups of muscles are the ones which suffer the most has suggested the theory that the destruction is in part due to the constant strain on the muscles when in a weakened condition. Gravity places the paralyzed limb most frequently in a position with the foot dropping downwards and the knees bent. The posterior muscles are thus in a measure protected from stretching, and hence may be regarded as more likely to escape local degenerative changes. The fact that the deltoid of the muscles of the arm is usually involved would support the theory, but paralysis of the gastrocnemius offers an exception, one, however, which is not common, and perhaps induced by accidental causes. Unproved as the theory is it would appear to deserve more consideration in the treatment of the early stage than it usually receives.

In treating this affection, besides whatever methods may be considered as capable of favoring a subsidence of the central irritation or promoting a gain of muscular power, attention should be paid to the prevention and correction of deformities, and in case of permanent paralysis to appliances which will aid locomotion, and in that way prevent farther degeneration from disuse of non-paralyzed muscles.

In regard to the prevention of deformities it seems probable that a great deal more can be done than is usually attempted. Facts as observed seem to justify the opinion that contractions are not an essential feature of the paralysis, but the result of the position of the injured limb.[4]

It should be an axiom of treatment, even in the earlier stages, that a palsied limb should never be allowed to assume the positions of the usual contraction for any length of time, and, if necessary to prevent this, appliances devised for the purpose can be worn.

In the correction of already existing deformities only those of the knee and foot demand attention here, contractions of the arm being rare, and it being impossible to gain much in the hand by any mechanical treatment.

[1] Gaz. des Hop., June 17, 1882, page 555.

[2] For cases of this sort see Meyer's Medical Electricity, American translation. An instance of complete recovery was also related to me by Dr. Chase, of Dedham.

[3] The child a year later died of pneumonia without having improved noticeably in the mean time.

[4] C. F. Taylor, Infantile Paralysis. Volkmann, Klinische Vortrage, No. I., 1.

The choice between strictly operative and non-operative methods is one to be guided more by the circumstances of the case than by any fixed rule. Any one who has had any experience with tenotomy will testify to the safety and the great ease with which deformities are corrected with the aid of tenotomy, and if it were left to a surgeon, aided by good nursing, to decide which method he would prefer, considering his own trouble, he would undoubtedly choose tenotomy, as the annoyance of fitting and watching an apparatus would be in this way avoided. There seems to be no reason to doubt of the repair after tenotomy in these cases. This has certainly been true in all the cases where I have performed tenotomy. This correction of the limb can be immediate, the limb being fixed by plaster of Paris or any mode of absolute fixation; or if that procedure is deemed hazardous, correction may be made to take place more gradually, at the expense, however, of greater trouble to the surgeon.

Tenotomy, however, is in the eyes of the public an operation, and as such is dreaded, disturbs the household, and is to be avoided if possible on that account. In by far the greater part of these cases an equally good result can be obtained by stretching as by dividing the muscles. The contracted muscle can be stretched by an appliance devised to correct the deformity gradually; or in certain cases the muscles relax under the employment of an appliance which checks motion in the direction of contraction but allows motion in the desired direction and enables the patient to stand, enlisting the aid of gravity to extend rather than shorten the muscle.

The choice of apparatus will vary according to the habit and experience of the surgeon; from the plaster of Paris, frequently reapplied, to a more or less complicated apparatus.

Beside correction of the deformity, it is desirable to promote locomotion. Morton, in Philadelphia, to accomplish this, doubled up his patients' atrophied legs without attempting to correct deformity, using them as if they were stumps after a thigh amputation, and placed them in artificial legs. Albert, of Vienna, in cases of paralysis of the quadriceps extensor muscles excised the knee-joints with a result of an anchylosis, enabling the patient to walk on a firm support, it not being possible for the knee to drop forward. In by far the greater number of these cases some power remains in the muscles at the hip-joint; or if that is not the case patients learn to swing at the hips in walking, their trunks remaining erect on the pelvis by action of the back muscles. If the patient with a palsied leg attempts to stand the limb gives way, the knee drops forward (never backward or sideways). If this is prevented the patient can of course stand as well as if the knee were anchylosed.

Apparatus, therefore, should be so devised that the knee cannot drop forward, and for its employment at best advantage there should be no contraction at the knee. As the apparatus is to be worn habitually it is better that it should be hinged at the knee with a catch that can be locked or unlocked.

It is important that the heel be brought fairly to the ground, as otherwise the limb is not placed well under the patient. Lateral deviations (varus, valgus, and calcaneus) do not prevent walking, but of course need correction for other reasons. Of the methods for this correction, which belong to the category of the treatment of club-foot, little will be said here, except that tenotomy is by no means essential, though the treatment is hurried by tenotomy, and not endangered by it.

It need hardly be added, although the fact must always be borne in mind, that the deformity is necessarily liable to relapse. As the paralyzed muscles cannot recover, the primary cause of the deformity must always be present, and will need constant attention. The patients may be considered to be in the condition of persons with artificial limbs, which must never be allowed to become out of repair.

The following facts in regard to infantile paralysis, (essential paralysis of children, myelitis of the anterior cornua,) should be borne in mind in treatment: —

(1.) Recovery complete or partial is the rule after the initial attack.

(2.) After the maximum of recovery has taken place the deformity becomes an important element in the affection.

(3.) Deformities should be prevented if possible and corrected when present.

(4.) The promotion of locomotion by suitable appliances is, in the late stage of the affection, the only means of treatment.

The application of proper appliances is a matter of simplicity in principle, requiring a great deal of attention in detail; as unless such apparatus exactly meet the indications demanded, full benefit cannot be obtained.

The surgeon should himself be familiar both with the principles and the detail of treatment, as he is otherwise unable to judge of the thoroughness of his methods.

NOTES ON A CASE OF ACUTE CHOREA IN AN ADULT, ASSOCIATED WITH PROFOUND MENTAL DISTURBANCE.[1]

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IN this case, which came under my observation at the West Riding Asylum, the absence of many accompaniments usually considered characteristic of chorea, as well as the prominence of the mental phenomena, seem to render it sufficiently instructive to merit some analysis.

W. W., a married man, twenty-three years of age, was admitted to the asylum February 18, 1882. The medical certificate which accompanied his papers of admission represented the patient to be a violent lunatic, the facts indicating his insanity being as follows, namely, (1.) Those observed by the certifying physician: "Talking incoherently, takes no notice of any questions put to him." (2.) Facts communicated by others: "Will sit for hours together without speaking." The patient's family physician stated: "He was by nature eccentric in his habits, and inclined to be self-willed. Just before the attack he became depressed in spirits, irritable in temper, and suspicious of those about him. During the attack he was sometimes violent, sometimes depressed, but had lucid intervals, raved indifferently on various subjects, and would strike with great violence indiscriminately." Chloral, bromide of potash, and belladonna, had been given, with no good effect.

When brought to the asylum the patient was securely bound by a straight-jacket, reënforced by heavy

[1] Read before the Boston Medico-Psychological Society.

leather straps. These had been applied by those intrusted with his removal. As soon as he was freed rom restraint he was seen to be suffering from severe chorea.

The patient was placed in a padded room after being bathed, and became much quieter.

Various members of his family were agreed on the following points in his history: As a child and youth he had been active, intelligent, fairly robust, and not emotional. He had never suffered from convulsions, rheumatism, or in short any illness other than the present, with the exception of "pleurisy, with inflammation of the lungs," several years before. There have been no deaths in the family, and few illnesses. The patient's domestic circumstances had been satisfactory. Just before and ever since his marriage, six months ago, he had worked very hard at his trade, carving and gilding. About four weeks before his admission he was obliged to leave his work on account of severe, continuous, and general cephalalgia, which persisted, and confined him to bed for two weeks. At this time noticeable alteration in his manner and conduct became for the first time evident. He was dull, preoccupied, and reticent, appearing dazed and indifferent to his condition and surroundings. He again went to work and seemed "like himself" in every way. A week later he returned home in a confused state of mind and soon became "delirious." For the next two days he was much excited, refusing to go to bed or to take food, threatening to throw himself out of the window, and crying at trifles. No hallucinations or delusions appear to have been expressed. Just after the excitement became pronounced he began to wriggle about in bed, fling his arms about, contort the face, protrude the tongue, etc. This disturbance subsided in a day or two. He then conversed freely and said that he had fallen in attempting to board a tram-car just before this attack came on, but did not meet with any injury; that he then became confused, and wandered about the town a long time before he could find his home. Three days before admission, when supposed to be rapidly convalescing, his former condition returned with renewed intensity, being ushered in by rapid and disconnected talk. From this time he became very unmanageable, and his movements were so energetic that he was with difficulty prevented from falling out of bed, and his knuckles and elbows were abraded from contact with the wall. He showed no disposition to violence.

Physical Appearance. — Pupils dilated, the right excessively so and only slightly responsive to light. All his voluntary muscles are affected with chorea. He incessantly writhes and plunges about the bed, tosses the arms, clinches the fists, contorts the face, etc. There are abrasions on elbows and knuckles. The skin over the sacrum is reddened, and on the tongue is an ulcer the size of a sixpence, caused by biting. The lungs appear to be in a healthy condition. The heart sounds are apparently normal. Pulse 140, and of fair strength. No swelling or redness of the joints. Appetite fair. He passes his urine and fæces in bed.

Mental Condition. — Though questioned in an interval of comparative calmness the patient can, evidently, make nothing of what is said to him. He is ignorant of where he is, how long he has been here, why he is here, etc. He makes incoherent, nonsensical replies to the simplest questions, but protrudes his tongue when asked. Expression lost and wondering. During sleep there have been slight movements of the upper extremities and head occasionally. He is to be given chloral hyd., twenty grains, morning and night, and the spine is to be sprayed with ether twice daily.

February 23d to 26th. On the whole there has been distinct improvement. The choreic movements are now absent during sleep. By day he is occasionally quite still, and although there is, at present, much movement of the head and facial muscles, he has been quite free from spasm. A small eschar has formed over the sacrum, and the abrasions of the elbows and hands are inflamed. He is fed by the attendant with soft food, but has great difficulty in masticating it properly. He is still irrational and incoherent. He talks in a whisper as if conversing with some one, and most disconnectedly. Says that he is in "Fletcher's Mills."

March 4th. He is not still a minute, although the movements are now confined to the face and upper extremities. He talks in a low tone most of the time. Occasionally he jerks out a sensible reply, after evidently trying to collect his thoughts, but soon wanders off onto a variety of subjects.

March 8th. He is quieter, but still scowls and rolls about somewhat. Touching any part seems to excite muscular contraction. He is still unable to concentrate his thoughts or to keep them in the right channel, just as he fails to direct his muscular movements properly after making a good beginning. He can tell the time and answer simple questions when roused and made to apply his mind. Still passes his evacuations in bed. Bed sore deep. A slough has separated from it under poulticing, etc., Chloral hyd. discontinued and tonic treatment substituted.

March 11th to 19th. There is but little mental improvement, although he has been generally quite free from morbid movements. He often starts up and looks about him, muttering disconnectedly. In answer to a simple question he replies, "They were laughing at me, — either jump over here or over there." Allows the medicine to drool from his mouth without attempting to swallow. Gives an occasional rational answer after much pressing. He is still unclean in his habits.

March 26th. The patient has been for some time entirely free from choreic movements. He now sits up most of the day. He has to-day, for the first time since admission, used the vessel voluntarily, and has walked about. His whole expression is brighter. He answers simple questions correctly, but not readily. He still stares wonderingly when addressed, and makes strenuous but vain attempts to understand and reply.

April 6th. His improvement has steadily progressed since last report, cleanliness being one of its earliest symptoms. The patient has now, in a great measure, recovered his intelligence. He knows where he is, and that he has been much deranged. His memory is nearly restored. He is still confused and wandering in his manner, and his ideas are not perfectly coherent. Expression rather perplexed and vacant. Elevation of the eyebrows and frowning is unduly frequent. He remains pale and thin. He eats and sleeps well. Gait fairly steady. Bed sore entirely healed.

Three weeks later the patient was discharged recovered.

Examinations of the heart made from time to time during the progress of the case, as well as the exploration of the fundi, gave negative results.

There was some elevation of temperature during the

hree weeks following his admission, it being 101.3° F. on February 27th, and during the remainder of the time only rising to 100.5° F. in four instances. The pulse remained rapid for about the same length of time. The patient showed no discomfort from the bed sore, and but little from the application of the faradic current.

Before considering the mental complication, which is the principal feature of this case, there are other particulars which deserve notice, even at the risk of some repetition. First, the absence of any mental defect or nervous troubles in the patient or any of the family, as well as the absence of a previous attack. Second, there were none of the usual exciting causes, such as alarm, mental excitement, or nervous shock, nor did repeated questioning of the relatives or examination of the patient reveal any history of rheumatism in any of its varieties, or of heart defect. These points when considered together, not to speak of the patient's age or sex, make quite an exceptional history for a case of chorea.

In regard to the disposition of such a case a word may be said here. Although many of the ordinary cases of chorea are attended at some stage by mental phenomena the motor symptoms so far predominate as to completely mask them. On the other hand, in the most severe cases the mental disturbance, which is often quite pronounced, being intensified by the energetic character of the movements, is apt to mislead the practitioner, who considers the patient simply insane, and sends him to an asylum. Whereas, if the case had been recognized at the start to be one of chorea he would hesitate to do so. The case just reported is an extreme example of this mistake and more may be found in asylum records.

We look in vain for the mention of the association of chorea with mental disturbance by many prominent writers, even slight mental enfeeblement, an almost universal symptom, being often unnoticed. It is probably considered by them as taken for granted that such a neurosis when at all severe cannot fail to produce indirectly some slight and evanescent mental manifestation at least. With others, however, the preponderance of evidence is in favor of the presence of mental disturbance in varying degrees of intensity in most cases of chorea. Ziemssen believes that psychical disturbances are rarely absent, although in the lighter cases they are but little developed, and consist only of irritability and changeability of temper. Dr. Arndt, a competent German observer, does not believe in the existence of chorea without more or less simultaneous affection of the intellectual faculties.

The consideration of these combined manifestations may best be approached by grouping our facts and conclusions according to the different periods of life, as the disease will be seen to present, in this respect, distinctive features. The liability to mental symptoms also will be found to be governed by the age.

(1.) *Childhood.* — The well-known and commonest form of chorea, characterized by twitchings of various sets of muscles, and more or less unsteadiness, occurs at this period. It is apt to be of long duration, is light in intensity, and not distinctly localized. Although the trouble gives considerable discomfort, mental symptoms are rarely evident enough to attract notice, but are likely to develop when the disease is prolonged. The memory becomes impaired, and there is great difficulty in concentrating the thoughts. This tendency of nervous impressions, to be expressed almost entirely by convulsive movements in early childhood, may be explained by the undeveloped condition of the higher centres, mental disturbances only preponderating with advancing years and consequent cerebral growth.[1] An extreme example of the influence of long continued chorea in lighting up mental trouble in a child predisposed to nervous disease is reported by Putzel. The patient, aged eight years, during and after a season of repeated attacks of chorea, began to show groundless aversion toward his parents, and finally exhibited delusions of sight and hearing, together with violent suicidal and destructive tendencies.

(2.) *Puberty and Early Adult Life.* — At this period (between the ages of thirteen and about twenty-three) the severe, dangerous, and fatal cases have been found to occur, and the mental phenomena to be most marked and peculiar. Our case is a remarkable example of this class both as to severity and mental complication. A comparatively small number of such cases has been recorded, and a few are here cited to show the variety of ways in which the mental symptoms may be manifested, as well as the conditions which influence them. Dr. Barker reported in the *Lancet*, many years ago, a case of chorea associated with hysteria, followed by temporary dementia. The features of interest were the presence of hysterical attacks — a frequent occurrence during chorea in young women — and also the appearance of mental failure succeeding to the cessation of the choreic symptoms. The dementia was manifested by incoherence, indifference to surroundings, fatuous expression, etc. Sturges reports a similar case in a boy of thirteen years, who had had a previous attack. The chorea was of a chronic form, and accompanied by hysterical seizures. After many variations he fell into a half fatuous state where it was extremely difficult to estimate the precise mental condition. Both of these observers, however, are inclined to ascribe the entire mental condition in these cases to the hysterical element.

Of two cases reported by Putzel under the head of maniacal chorea, one occurred in a girl of seventeen, with no hereditary neuropathic tendencies, after sudden arrest of the menstrual discharge. In this case the mental aberration, which was manifested by delusions of persecution and identity, as well as by great violence and destructiveness, was most marked at the height of the affection, and disappeared soon after the subsidence of the other symptoms.

An unusual variety of insanity, termed "rheumatic," which occurs in the course of acute rheumatism, has also been called "choreic" on account of the frequent and singular combination of mental and bodily symptoms. Clouston [2] reports two striking cases, and refers to similar ones reported by Griesinger and Fleming. Wigglesworth [3] contributes two cases with corresponding symptoms. Such attacks are described by Clouston as follows: "A patient laboring under acute or subacute rheumatism ceases to complain of the pain in

[1] Maudsley has given the name "choreic" insanity to a kind of delirium peculiar to children, which is characterized by marked incoherence of an automatic type, but *accompanied by none of the motor symptoms of chorea.* When used in this sense the term "choreic" insanity is misleading, as one might reasonably infer from it the presence, to some extent, of the bodily pathognomonic symptoms of chorea, whereas we find in their place as a basis for such a classification only a fancied similarity between mental and motor incoördination in a few cases of insanity in children.

[2] Journal of Mental Science, July, 1870.

[3] Ibid., July, 1872.

the joints, and simultaneously shows signs of mental excitement of a peculiar delirious type, insomnia, intense excitement, violent, ungrounded fears, utter disregard of danger, etc. . . . Accompanying these symptoms, beginning along with them, varying in their intensity as they vary, and passing off as they disappear, is a series of violent choreic movements. The features are contorted, the head jerks from side to side, the limbs are thrown about, and the body is raised up and down. Along with the choreic movements hallucinations of the senses show themselves." Thus we have maniacal chorea occurring as a symptomatic form of acute rheumatism at this period of life.

Returning to W.'s case we are struck by the persistence of the mental symptoms for a considerable period after the cessation of the chorea, no less than by the antecedent and accompanying derangement. This is all the more remarkable when we call to mind that the acute dementia which occasionally follows a rapid succession of severe *epileptic* fits lasts but a short time even when the patient has been greatly prostrated by the convulsions. It is not sufficient, therefore, to explain such a condition of things by referring it to the irritation of the choreic movements or the anæmia or bodily weakness of our patient, more especially as the mental disturbance not only followed but preceded and accompanied the convulsive movements. Moreover, in the light of analogy and recorded observations something more is necessary to account for such an exceptional occurrence than the obvious supposition that the delicate nerve mechanism would be long in regaining its function. Our knowledge of the pathologico-anatomical changes and the way in which they act on the central nervous system is so meagre that the causes in such a case as this can only be surmised. Nevertheless it is reasonable to assign the associated phenomena to some common cause, the nature of which has yet to be determined, and to consider the psychical and choreic changes independent of each other.

(3.) *Middle Life.* — The rare, incurable cases of this period are frequently found to be associated with some form of chronic mental disorder, and examples of this class may be found in most asylums. The spasmodic twitchings and phenomena of incoördination occurring at this time are generally localized, and not severe, giving, in fact, little inconvenience. They are apt to appear late in the disease, and are subject to remissions. In this period also, and in that of old age, there is a symptomatic type, if we can so designate, as does Ziemssen, those cases which are based upon anatomical lesions of the brain and cord.[1]

(4.) *Old Age.* — Besides the special class mentioned in the preceding division there are many cases in which the chorea of old age is accompanied by mental disorder, which can properly be referred to any gross organic lesion. Professor Charcot in his recent work on senile chorea has, we are told, no pathological anatomy for it. He regards it as merely an emotional disease, and quotes examples to show its origin in distressing events and violent passions, as well as the mental enfeeblement that goes along with it. Between this form of the disease and that occurring in middle life there is no decided difference, except that it is a more common occurrence, if its frequency among the aged insane in asylums is any criterion. Moreover, it has been thought by some to be in many cases a potent *cause* of mental imbecility in old people by its prolonged continuance, extending, as it does, over many years.

If we view as a whole the above facts and observations, we see exemplified in one and the same disease the transition from motor to mental disorder in the natural order of cerebral development. In childhood chorea is very frequent, and takes the form of light but prolonged and chiefly convulsive attacks, with only slightly impaired, because undeveloped, intelligence. At puberty and in early adult life the attacks, though less common, are the most severe as to convulsions, and are frequently attended with mental impairment, such as hysteria, dementia, and even acute mania and delirium. In middle life, the period when insanity predominates, chorea is rare, of a mild type, and when associated with insanity is insignificant in comparison with the amount of mental trouble, which is often due to some organic lesion. In old age the cerebral functions, being often scarcely less limited than in childhood, it appears not infrequently, is associated with insanity of a mild and chronic type, and though localized is persistent and not severe.

By thus classifying cases of chorea according to the character of the accompanying mental phenomena, the attempt has been made to point out the fact of a closer relationship between mental disease and chorea than is usually recognized. The results will also serve at least to swell the evidence in favor of the cerebral nature of this disorder. At the same time these observations are not to be considered as tending to overestimate the importance of a usually harmless affection. They are presented merely to bring into the foreground a peculiar aspect of chorea as a step toward a closer acquaintance with the disease in its clinical relations.

[1] Vide four cases in Journal of Mental Science for July, 1881, by Drs. McLeod and McDowell, and one in same Journal for July, 1880, by Dr. Bacon.

HEART PUNCTURE AND HEART SUTURE AS THERAPEUTIC PROCEDURES.[2]

BY JOHN B. ROBERTS, M. D.

It is more than probable that, in a few years, puncture of the heart wall (cardicentesis), with direct abstraction of blood by aspiration, will be recognized as the best treatment in cases of greatly dilated or much distended right heart, with intense pulmonary engorgement, and that incision of the pericardium with suture of the heart muscle will be accepted as proper in cardiac wounds. Hence these latest novelties in cardiac surgery deserve the attention of the Fellows of the College.

That punctures of the heart are comparatively harmless has been well known to many for some years. In 1872 Roger, while performing pericardicentesis on a child with pericardial effusion, thrust the needle into the right ventricle, and withdrew about six and one fourth troy ounces (two hundred grammes) of pure venous blood. The boy, who was aged five years, became pale, sweated, and had an imperceptible pulse. The withdrawal of the pericardial fluid, accomplished prior to the heart injury, was beneficial, and the cardiac puncture did no permanent mischief, for the patient recovered. Death occurred five months later

[2] Read before the Philadelphia Academy of Medicine, January 3, 1883.

from long existing dilatation and valvular disease of the heart.[1]

In Hulke's case [2] a woman with pleuro-pneumonia was supposed to have large pericardial effusion, and a trocar was introduced through the fourth left intercostal space. Nothing escaped except a drachm of venous blood, after which the patient seemed relieved of dyspnœa. She died four weeks later from a complication of diseases, and the autopsy revealed cardiac dilatation and valvular changes.

I have said elsewhere,[3] in commenting upon this case, "The abstraction of blood seemed to relieve the distended heart much better than phlebotomy would have done, as was evinced by the diminution of threatening symptoms and the decrease of the area of dullness."

Cloquet, Bouchut, Legros, and Onimus have also observed the apparent innocuousness of wounds of the heart made by capillary trocars. Steiner found, ten years or more ago, that electro-puncture needles could be quite safely introduced into either ventricle, provided they were at once withdrawn.[4]

It has been considered less safe to puncture the auricles, but the interesting paper of Dr. Benjamin F. Westbrook, just published in the *Medical Record* for December 23, 1882, seems to show that our fears are as unfounded as were those of our predecessors in regard to ventricular puncture. It is, in truth, to call attention to his case of harmless *intentional* cardicentesis, and to his researches in the surgical anatomy of the operation, that I have been led to refer to the corroborative evidence of the cases mentioned above.

I have with much satisfaction, as have many others, done venesection at the bend of the arm for the temporary relief of the distressing symptoms of dilated heart, and for the dyspnœa due to the pulmonary engorgement of acute pneumonia. If, however, a few *drachms* of blood drawn directly from the heart give the relief that could only be afforded by taking a similar number of *ounces* from the veins of the arm, it seems proper to adopt the former measure. The subsequent circulatory depression from anæmia would undoubtedly be less than after the latter operation.

It is manifestly necessary, however, to determine that cardicentesis is innocuous before it can take the place of venesection. The above-mentioned cases and Dr. Westbrook's experience tend to show that such is the fact.

Dr. Westbrook believes that the proper place to perform the operation is in the third costal interspace close to the *right* edge of the sternum. This situation enables the operator to tap the right auricle without injuring the right internal mammary vessels, and with little danger of striking the tricuspid valve. My own preference would be to perforate the ventricle of the right heart by introducing the needle through the fourth interspace, about one and a half or two inches to the *left* of the median line of the sternum. Dr. Westbrook's opinion, however, is entitled to more deference than mine, because he has studied the subject with special reference to cardicentesis, while my special investigations have been limited to the consideration of pericardicentesis.

Further experimentation in heart-puncture for the relief of cardiac distention and pulmonary engorgement is requisite, but it is probable that it will soon become a well-recognized surgical procedure in selected cases. Pericardicentesis has already taken that position, and there is no reason to believe that cardiac surgery will stop its march with the demonstration that the pericardium can be treated as the pleura.

In October, 1881, I read a paper before the Anatomical and Surgical Society of Brooklyn,[5] in which I advised resection of costal cartilage and incision of the pericardium for removal of foreign bodies in the pericardial sac, and at the same time said: "The time may possibly come when wounds of the heart itself will be treated by pericardial incision, to allow extraction of clots, and perhaps to suture the cardiac muscle."

It seems as if this time had now almost arrived, for Dr. Block has not only expressed a belief that death can be averted in many cases of heart-wounds by simple incision of the pericardium to allow escape or extraction of the clots which cause pressure and death, but has also undertaken to demonstrate by vivisectal experiments that suture of the heart is a simple operation and requires but three or four minutes.[6] He finds that opening of the right and left ventricles, and entire compression of the heart for the application of sutures, can be supported by rabbits for several minutes. During suturing he seizes the apex of the heart and draws the organ forward until the traction prevents the escape of blood from the wound. Sutures are then introduced, or the orifice closed by ligation. Even if cardiac pulsation and the respiration stop during this mechanical interference with the heart's movement, death, he asserts, does not necessarily unsue.

These experiments are even more important than the researches spoken of in regard to heart-puncture. I regret that as yet I have not been able to consult Dr. Block's original memoir, but I hope at a future time to do so, and perhaps to be able to report some investigations of my own which I desire to make in the same direction.

RECENT PROGRESS IN DISEASES OF CHILDREN.

BY T. M. ROTCH, M. D.

CRANIAL FISSURES IN INFANCY.[7]

PROF. J. WEINLECHNER, of Vienna, has published a carefully prepared paper in the *Jahrbucher für Kinderheilkunde*, presenting his investigations on the results following blows on the head during infancy, and entitled Subcutaneous Cranial Fissures, Cranial Openings with adherent Cerebrum, and False Meningocele. His deductions are made from his experience with thirteen cases, and may be summarized as follows, as already published in the *American Journal of Obstetrics:* Intra-uterine cranial fissures and fractures are extremely rare. Those occurring during delivery, and occasioned by forceps or narrow pelvic straits, are more frequent, while in a certain number of cases subcutaneous fissures are caused post partum by various traumatic causes. Here belong the falls upon the head

1 Bull. de l'Académie de Médecine, 1875, page 1276.
2 Trans. Clinical Society of London, viii., page 169.
3 Paracentesis of the Pericardium, 8vo, Philadelphia, 1880.
4 Med. Times and Gazette, May, 1873, page 492, from Langenbeck's Archiv für klin. Chirurgie.
5 The Surgery of the Pericardium; Annals of Anatomy and Surgery, December, 1881.
6 Amer. Journal of the Med. Sciences, January, 1883, page 276; from Journal de Méd. de Paris, October 28, 1882; from Gaz. Méd. de Strassburg, October 18, 1882.
7 Jahrbuch für Kinderheilk., xviii. B., 4 Heft.

in rapid or "street" births, and later on blows of all sorts on the cranium. Such accidents may lead to two different forms of disease: (1.) Extension of the fissure to a cranial opening with apposition of the brain, or (2) false meningocele, the fissure here also widening. The cases show clearly that large cranial openings may develop from even slight subcutaneous fissures occurring traumatically in infancy. It is probable that most of the cases reported as congenital are really caused in this way. In twelve of the thirteen cases the trouble could be traced to trauma. Thus there were, —

(1.) Fall on head.
(2.) Fall on a footstool, and loss of consciousness.
(3.) Fall from arm to ground, followed by vomiting.
(4.) No traumatic cause could be demonstrated either by the history of the case or at the autopsy.
(5.) Found at the autopsy: several fissures with the remnants of a hæmorrhage.
(6.) Ditto.
(7.) Fall on the head.
(8.) Forceps delivery; at autopsy extensive pigmented fibrinous deposit.
(9, 10, 11.) Fall on the head.
(12.) Blow on head by a windmill.

Two different clinical conditions were found sometimes combined with one another.

A. An opening in the bone, generally irregular, in the form of a weaver's shuttle or an egg, and usually in the parietal bones. There may be extension from this to the neighboring sutures. The edges and often the whole parietal bone are bulged outward like a crater. The brain presses against the coverings of the opening, pulsates clearly, but does not project much. It cannot therefore be called cerebral hernia Seven of the thirteen cases belonged to this class.

B. There is a soft, fluctuating, sometimes transparent, tumor, which becomes smaller on pressure, pulsates more or less, but never so clearly as in the first class of cases. The edges of the opening are clearly felt only after the fluid, which has the color and chemical nature of the cerebro-spinal, is removed. The opening is only partially closed by the dura, which is closely adherent to the edges, but which has numerous openings communicating with the subdural space. The inner wall of the cyst is not formed of dura, but of connective tissue, hence it is to be considered a secondary cyst or false meningocele, having the contents of a true meningocele, but not the walls. They are larger than those of the first class of cases, sometimes reaching the size of two fists. They have a constant growth, while in the first class of cases there comes, after a time, a pause.

C. A combination of both forms. This was seen in Case 5, which is unique. The professor devotes some space to the manner in which these two forms may arise from a fissure. In both the motive power is the pressure of the cerebrum. In both the dura is probably torn, but in Class A the dura, with the, perhaps, injured brain, is pressed against the fissure, and becomes firmly adherent, and then the whole bone is arched outward, while in the B class some fluid escapes through the torn dura, and the pressure is thus partially exerted on the walls of the cyst. All the cases reported occurred at a very early period of life. The prognosis is different in the two classes. The first class reaches a point where the enlargement ceases. There is, however, always the danger of injury from without to the so slightly protected brain. The meningoceles, on the other hand, continue to grow. What size they might reach cannot be stated because in the cases reported death has occurred from meningitis following puncture. The largest tumor on record reached the size of two fists at the age of two and a half years. If they are not punctured spontaneous rupture is apt to occur. The largest fissure on record (Bardak's case) measured nine by six centimetres in the twenty-eighth year. The principal growth takes place in the early years, but even after the bones are firm the fissure may increase by resorption of the bone. This process is of course slow, but in one case amounted to an increase of two centimetres. In the first class of cases we can do nothing except to protect the brain by a well-fitting plate. Attempts at pressure exercised on the whole cranium have proved failures, and puncture is dangerous. In the second class puncture is not very dangerous even if repeated, but the sac rapidly refills. The best treatment, perhaps, is to puncture, and then, under the same precautions as in spina bifida, to inject iodine. This, however, is much more dangerous than simple puncture.

INTUSSUSCEPTION.[1]

In view of the varied opinions which exist concerning the advisability of abdominal section in cases of infantile intussusception it is well to carefully note all cases that are treated by this method, in order that a more precise knowledge of the dangerous results which may follow may be arrived at. Mr. Rickman Godlee has lately reported three cases before the Clinical Society of London.

Case I., aged nine months, was admitted into University College Hospital with well-marked symptoms of intussusception, from which it had been suffering for four days. The infant was very ill and weak, and it was doubted whether it was justifiable to perform any operation. It was not thought wise to spend much time in inflation, and accordingly abdominal section was performed without delay. Antiseptic precautions were adopted throughout, the child being protected as much as possible from the chilling influence of the spray by using as small a volume of it as possible, and wrapping up the greater part of the trunk and legs in cotton-wool. No great difficulty was experienced in finding the point of involution, nor in reducing the intussuscepted part; the wound was secured as in an ovariotomy, and a dressing of iodoform wool was applied, and secured by a flannel roller. The temperature rose the day after the operation to 105° F., but soon fell to about 100° F. It was necessary to give small quantities of brandy after the operation, and for some few days minim doses of laudanum were given to check restlessness and a slight diarrhœa, which ensued. A little suppuration occurred along the course of the sutures, but the wound healed well, and by the eleventh day it had completely closed, the infant apparently being in perfect health.

Case II. was a somewhat younger infant, who had been seized with sudden pain two days previously. The symptoms of intussusception were clear, and a sausage-shaped tumor was felt to the right of the umbilicus, easily movable, especially from above downward. In the intervals between the spasms the infant was apparently free from pain. Abdominal section was made under the influence of chloroform, and re-

[1] Medical Times and Gazette, December 16, 1882.

duction was effected by grasping the end of the ileum, and drawing it towards the wound. Next morning the infant seemed pretty well, but peritonitis set in rapidly, and death occurred the following night. The spray used in this case was remarkably small. At the autopsy the last two inches of the ileum and the first two of the cæcum were found much congested and thickened, and some slight ulceration had occurred in the ileum; the rest of the intestines were almost empty. There were marked appearances of peritonitis.

Case III. An infant aged fourteen months was admitted into the North Eastern Hospital for Children, with symptoms of intussusception that had lasted several days. The infant was very ill, and the abdomen much distended and tender. The bowel protruded at the anus. Abdominal section was performed. It was very difficult to find the joint of involution, which was seated deeply in the splenic region, and correspondingly difficult to effect the reduction. After about four inches had been drawn out the cæcum and vermiform appendix appeared, and Mr. Godlee, thinking that the reduction was complete, drew the cæcum towards the iliac fossa, and closed the wound in the abdominal wall. The infant never rallied, and died eight hours after the operation. At the autopsy it was found that seven inches of large intestine still remained unreduced. It was clear that the involution had begun, not, as is usual, at the ileo-cæcal valve, but at some point in the course of the transverse or perhaps the ascending colon; some sloughing had already occurred in the cæcum.

Mr. G. Brown related the case of a boy two years and nine months old, in which he had been unable to reduce the intussusception by manipulation after abdominal section. The attempt at the formation of an artificial anus was made as a last resource, and it was then discovered that the volvulus had become adherent, probably throughout its whole extent, to the outer layer of the intussusception, a condition which fully explained the inability to effect reduction. Vomiting set in after the operation, and death ensued in six hours.

Mr. Bryant thought that there was much analogy between the course of hernia and that of intussusception; in the early stage of each temporary measures were more likely to do good. Taxis was of value in reducing a hernia of recent date, but later it did harm, and much the same view might be held of insufflation in the treatment of intussusception.

Mr. Godlee remarked that great exhaustion was more likely to follow inflation in very young infants than in older children.

CONGENITAL INTESTINAL OBSTRUCTION.[1]

In the report of the Clinical Society for April 28, 1882, Mr. A. Pearce Gould reports the following case of congenital obstruction: A female, age three days, was brought to the Westminster Hospital, because in spite of several doses of castor oil it had not passed any meconium or fæces. It had vomited several times. The child was thin, but showed no outward deformity. The anus was normal, and the last joint of the little finger could be passed into the rectum, which seemed to be closed above. No fullness or tumor could be felt in the pelvis per rectum. A catheter and probe were each stopped about one inch from the anus. The abdomen was distended, and its walls œdematous; there was a little ascites. On the following day Mr. Gould opened the abdomen above the left Poupart's ligament. A coil of distended small intestine presented, and no coil of large intestine could be brought into the wound. So the former was carefully stitched to the edges of the incision and then opened, allowing a large quantity of meconium to escape. The child died twenty-one hours afterwards. At the autopsy no trace of peritonitis was found. The cæcum, the lower four inches of the ileum, and four inches of the colon, were filled with a firm, whitish substance, of the consistence of cheese, firmly applied to but not united with the intestinal mucous membrane. In the colon, beyond this plug, were found several masses of milk-white, firm mucus. Below this the colon and rectum were empty and firmly contracted to the size of a pipe-stem. Above it the small intestine was distended with meconium and gas. There seemed to be no fault of development but obstruction from a plug, and from the white color of the plug it was assumed that it was deposited by the third month of fœtal life, as bile appears to pass into the duodenum at the third month. Mr. Gould thought that the plug was inspissated mucus, showing that the glands of the large intestine must be acting some time before birth. Three cases of congenital obstruction referred to by Mr. Holmes, and the case of obstruction from a croupous membrane recorded in the Clinical Society's Transactions, by Dr. Skerritt, were also spoken of.

[1] Practitioner, September, 1882.

IMPERFORATE ANUS.[2]

Dr. J. K. Robertson reports the case of a male infant, in whom on examination when two days old no anal opening was found. In the anal region there was a thinning of the skin, which was a little laxer than that of the surrounding perinæum. The raphe was continued right through its centre, though it was here less marked; an incision an inch deep was made in the median line, but no intestine was found; a trocar was then plunged into the centre of the incision and meconium escaped through the canula. The infant recovered from the operation, and grew well without further trouble, the fæces finding an exit from the urethra as well as from the artificial anal opening. The child died of croup at the age of fourteen months. No autopsy.

THE ACTION OF CALOMEL ON FERMENTATION.[3]

Wassilieff's paper on this subject in the *Zeitschrift für Physiologische Chemie* is of interest from the connection which it has with the great rôle which calomel has played in the treatment of the gastro-intestinal diseases of infancy and childhood. In M. Wassilieff's experiments, calomel was added to the fluid obtained by acting on albumen with gastric juice, and to that obtained by acting on albumen with pancreatic juice; and he satisfied himself that the albumen-digesting ferment of both these fluids was not damaged by calomel, peptones in the one instance and leucin and tyrosin in the other appearing as usual; but the presence of calomel prevented the formation of secondary products such as indol and phenol. Neither hydrogen nor hydrogen sulphide formed in the fluids containing calomel, whilst they were abundantly produced in the others. In like manner the author experimented on the effects of calomel on the fat-digesting and the amylolytic ferments of the pancreas, and found that it had no

[2] Glasgow Medical Journal, November, 1882.
[3] Lancet, March 4, 1882.

modifying influence upon them, but that it arrested the changes which followed their completion, entirely preventing, for example, the butyric acid fermentation and putrefactive processes. He hence arrives at the conclusion that calomel acts differently on the formed or organized and the unformed or unorganized ferments, permitting the action of the former to proceed unchecked, but completely preventing the action of the latter.

CONGENITAL MALARIA.[1]

In the *Rev. de Méd.*, July, 1882, Dr. C. Lerouse derives the following conclusions from a careful study of this subject: (1.) It is as yet impossible to affirm the existence of a congenital form of malaria, or to establish the influence of heredity in infantile malaria. The reported cases are not numerous enough or sufficiently conclusive. (2.) The discovery of certain cases of congenital hypertrophy of the spleen in children born of malarial parents, in which the hypertrophy can be attributed to no other cause, together with the presence, in such cases, of other signs of malarial cachexia, render the existence of a congenital or hereditary form of malaria not altogether improbable. (3.) Certain children appear to be born with an inherited predisposition to malaria, and may even without being directly exposed to external malarial influences suffer from the time of their birth from an intermittent form of fever, of a type similar to that existing in the mother.

MALARIA IN CHILDREN.[2]

Dr. L. E. Holt has written a paper on the peculiar manifestations of malaria in children, and speaks of it as a field of observation which has been much neglected. He says that the organism of the child is peculiarly susceptible to malaria, and that it has been observed in epidemics that young children are the first to be affected, and that the poison acts more rapidly and more profoundly than in adults. The susceptibility also of the nervous, digestive, and respiratory systems produces such variations in the form and type of the disease as to mislead at times even those most careful in diagnosis, the symptoms referable to a particular organ often completely overshadowing the real disease, and giving an entirely new clinical picture. The attacks are at times so incomplete that even death may follow in the masked forms before the diagnosis can be made. Again the symptoms often come on so insidiously that the physician is not summoned until they have made considerable progress, and have obscured the diagnosis.

Dr. Holt's observation confirms that of Schmiedler, who states that there is scarcely any disease which is so changeable, obscure, and indefinite as intermittent fever in children, and that the closest observation on the part of both physician and attendants is often required to establish the fact of periodicity in the symptoms or the existence of a cold or sweating stage.

Dr. Holt confines his attention to the symptomatology and diagnosis of the disease, as he considers that the prognosis and treatment usually present no difficulties, and do not materially differ from the same in the adult. His experience is drawn from a study of one hundred and eighty-four cases, whose dwellings were in the most malarial district in New York. Ninety cases were males, and ninety-four females. One patient was under six months of age; six were under one year old; forty-five were between one and four years of age; fifty-four were between four and seven years of age; thirty-seven were between seven and nine years of age; forty-eight were over nine years old.

The invasion of malaria was found frequently to be more gradual than in adults, and in the abrupt cases the symptoms noted were convulsions, vomiting, drowsiness, prostration, fever, severe pains in head and epigastrium, splenic enlargement and tenderness, and occasionally hepatic tenderness. In the cases with gradual invasion there was anæmia, frontal headache, constipation, sometimes diarrhœa, anorexia, malaise, heavily furred tongue, epigastric pains, and nausea, drowsiness during the day and restlessness at night, slight cough, hot and cold by spells. The spleen in the great majority of cases, but not in all, was enlarged, and in many cases these symptoms occurred rhythmically every day or every other day, but often without any periodicity. The hour of invasion was noted in one hundred and six cases, and found in thirty-five cases to be in the forenoon, and in seventy-one cases in the afternoon or evening, thus differing from the disease in the adult, where this proportion is reversed. In the majority of cases the diagnosis could not be established by depending on a regular succession of chill, fever, and sweating. In one hundred and fifty cases the chill occurred in only nineteen, and in only about one half of these was it pronounced, and in only about one in five cases was there present anything resembling a cold stage. Fever was the most constant of all the symptoms, and varied as it does in adults; in its course it seemed to fall into three groups: —

First, those cases in which the temperature rose quite high at the outset, and remained so with very little variation for twenty-four, forty-eight, or seventy-two hours, when a marked remission occurred, and the fever then became distinctly remittent.

Secondly, those cases in which the fever was at first slight, and only noticed at some particular part of the day, usually towards evening or at night, but gradually increased in intensity, losing its periodic character until it became a continuous fever, with usually slight daily remissions, not rising at any time above 103° F.

Thirdly, those cases in which the fever assumed a distinct type from the outset, remittent or intermittent, and recurred regularly until controlled by quinine. The last was the rarest form. Out of one hundred and fifty cases the quotidian was in the proportion of five to one to the tertian, and there was no instance of the quartan type. In nearly one third of the cases no distinct type could be said to exist. In only one seventh of all the cases was the temperature found to have risen before the use of quinine above 104° F. In only three cases was it above 106° F. The highest recorded was 106¾° F.; this last was in an infant ten months old, and this fell on the following day to 101⅔° F. The average temperature was from 101° F. to 103⅓° F.

Sweating was noted in a little more than one quarter of the cases; it came later, and was much less marked than occurs in adults; it was profuse in seven cases. Cerebral symptoms of some form were the rule, and were carefully noted in ninety-seven out of one hundred and fifty cases; they were entirely absent in only four cases. Out of ninety-seven cases pain in the head occurred in

[1] Practitioner, November, 1882.
[2] American Journal of Obstetrics, January, 1883.

sixty-two, and was almost invariably frontal, and as frequent in the chronic as in the acute cases. Drowsiness or dullness, amounting at times to stupor, was the next most common head symptom. Convulsions were recorded in four cases, and in two cases occurred at the onset of the disease, and were not repeated; the ages were, one, a boy of eleven months, and the other a boy of four years. The third case was a girl twenty-one months old, in whom three convulsions took place on the same day within a few hours of each other. The fourth case was a boy, aged four months, who had five convulsions in three days. All of these cases terminated favorably, and in only one were the convulsions severe.

Vertigo was only noticed in three cases.

(To be continued.)

New Instruments.

A NEW FRAME SPLINT FOR HIP DISEASE.

BY F. S. WATSON, M. D.

It is a well-recognized principle, accepted, I believe, by even the most urgent advocates of the "up and about" treatment of hip disease, that there are periods in its course when enforced quiet to the affected joint offers not only the speediest relief subjectively to the patient, but also gives the joint its best chance for ultimate recovery. This is notably the case in the early stage of the disease, where the synovial lining of the joint is the primary seat of the affection, or where, in virtue of fluid pressure within the joint either from the presence of an increased synovial secretion or of pus which has made its way thither from a neighboring ostitis, pain is a prominent symptom.

Various appliances and apparatuses have been devised to secure partial or entire immobilization of the joint. And we have a number in use, from the weight and pulley extension to Bonnet's wire frame, Sayre's wire breeches, Thomas's fixation and Taylor's extension splints. Two ideas are prominent in these appliances. In one set the attempt is made to secure rest to the joint by, so to speak, incorporating the splint with the body and leg of the patient. And to this class belong the Thomas, etc. In the second class contraction of the thigh muscles is considered an important element in the production or continuance of pain, and this it is sought to overcome by efficient extension. All these appliances are open to criticism, *in so far as they profess to secure* efficient and complete rest to the joint.

The criticism, broadly stated, which is applicable to the first class may be expressed thus: It is impossible so to bind a splint to the leg and body of a patient that the patient and the splint shall not be capable of movements independent of each other, and at the same time permit of the splints being worn by the patient. And if the splint be not so applied, harm rather than good may result to the joint, owing to the varying pressure and friction transmitted to it by the independent movements of the splint and patient. One more important element is wanting in the construction of most of them, namely, extension and perineal counter-extension, which seems the most efficient manner of overcoming muscular contraction.

The weight and pulley supply simple extension, but are defective in securing rest to the joint in that the patient can raise the body on the joint, thus causing friction, can roll from side to side, thus bringing pressure on to the trochanter of the diseased side, and, moreover, lacks perineal counter-extension, without which definiteness of extension is lost. This we get in Taylor's admirable splint, which, however, when joint immobilization is desired, fails, because the patient can move the body on the joint or roll on to the trochanter. Seeing these defects, Dr. E. H. Bradford, of Boston, a few years ago had constructed a rectangular iron frame, between the sides of which stout cotton cloth was stretched, leaving an interval for the nates of the patient. Upon this frame the child could lie, and, wearing an extension splint, could be moved with much ease.

It was in the hope of going one step further toward securing joint immobilization that I have had the frame splint constructed, for a description of which I beg the courtesy of your columns.



FIG. 1.

A B, rectangular iron frame. C B, forming the lower part of the frame, is an adjustable foot-piece, which can be lengthened or shortened, and fixed at any point by a set screw on either side. D, movable iron arm bent to fit the curve of the thigh and placed above the knee to aid in preventing flexion of the thigh. E, adjustable upright, to which is attached a perineal strap, F. G, sliding plate, to which are attached the shoulder straps, H, on either side of the frame. The shoulder straps are connected by a strap running across the chest, which keeps them in place.

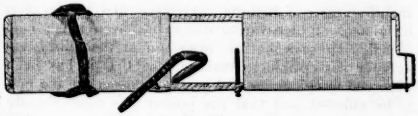


FIG. 2.

The same. The sides of the frame have been wound with cotton bandage, and stout cloth has been stretched across between the sides, leaving only an interval for the patient's nates.

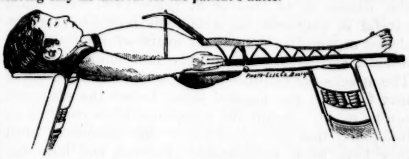


FIG. 3.

Shows the patient upon the frame, which rests upon two chair-backs. The extension straps are here in position.

When it is desired to place a patient upon the frame he is laid upon it, and the space to be left open in the cotton cloth for the nates is noted. The iron arm which crosses the thigh is slid along the frame to its proper position and there fixed. The same is done for the upright bearing the perineal strap and the plates bearing the shoulder straps. The patient is then removed, the frame wound with bandage, the cotton cloth stretched tightly across and sewed in the middle line behind. The patient is then placed upon the frame, as in Fig. 3. Extension is made by carrying the extension straps to a revolving bar with key and ratchet attachment in the foot-piece, upon which they are wound, exercising as much traction on the leg as may be desired. The perineal strap is adjusted before ex-

tension is made. The arms are passed beneath the shoulder straps, and the cross strap buckled.

When thus placed upon the frame the following points are secured: —

Extension and perineal counter-extension.

Impossibility of raising the body on the leg, or of flexing the leg on the body, or of rolling from side to side.

Entire freedom is allowed for movements of the arms and of the unaffected leg.

The patient can be moved from place to place with the greatest facility, undertake car journeys, be carried out-of-doors, etc., with the minimum of disturbance to the joint.

The sphere of action of this frame is limited. When deformity is already present it has to be overcome before the splint can be advantageously used. This is best accomplished by making extension in the line of deformity. This splint does not, of course, replace in any way the appliances which allow of the patient's moving about, which in a later period of the disease is so important a part of the treatment.

The frame has now been worn by three patients, in each case with relief from pain, with the greatest comfort to the children, and with an entire absence of any injury resulting from pressure on any part of the body. When the patient is lying upon the frame on a mattress the sides of the frame sink into the bed just far enough to prevent any injurious pressure from them. It is not necessary to employ very powerful extension, and hence no complaint is made of the perineal strap, so that we may safely say that sloughs will not result from its use. In the first case in which it was employed the patient lay upon it for two months, and constantly derived the greatest comfort from it.

Two measurements are necessary for the construction of this splint, — the patient's length and the width between the acromion processes.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

H. C. HAVEN, M. D., SECRETARY.

October 28, 1882. Dr. R. M. Hodges presiding. Dr. T. S. Watson presented

A NEW SPLINT FOR HIP DISEASE.[1]

Dr. E. H. Bradford said that he had seen the splint in practical operation for the last six or eight months, and it seemed to him to afford the best method of fixation of the joint, better than Bonnét's goultière or Sayre's wire breeches. Dr. Bradford had sometimes found it advisable, in the case of an active child, to restrain the movements of the well leg by another knee piece similar to that described for the affected side. The patient whom Dr. Watson had shown was in a wretched condition when admitted to the hospital, whereas now her condition was excellent, as could easily be seen from her appearance.

Dr. C. D. Homans asked if those using the splint had not been troubled by abrasion caused by the perineal strap. Formerly an apparatus somewhat similar to this was used extensively in fracture of femur; that is, extension by ratchet and counter extension by perineal strap. This apparatus was given up on account of the abrasion caused by the perineal strap, and it seemed to Dr. Homans probable that the same trouble would be met with in using the splint of Dr. Watson.

Dr. Bradford replied that he had not as yet met with any cases either in hospital or private practice where he had been obliged to forego the use of the splint on this account.

Dr. C. P. Putnam thought the amount of pressure practically brought into the perinæum had been overestimated. He had once tested the amount that a child's perinæum could bear, and found that twelve pounds could be borne for a short time, but before long gave great pain. He thought it would be found that the pressure was seldom over six pounds.

The management of the perineal strap was comparatively easy while a patient was in bed, or while using an apparatus that did not bring the weight of the body into the strap, but much more difficult when a patient was walking with a long hip splint.

Dr. Marcy agreed with Dr. Putnam in his view that a small amount of force was all that was necessary to secure the desired result.

In regard to the objection of Dr. Homans, Dr. C. P. Putnam thought the method of applying the perineal strap made a great difference; formerly it was carried upwards on a slant, in front as well as behind, and pressed hard against the edge of the adductors. Now it is usually attached, as in the apparatus just exhibited, at a point somewhat in front of the groin and carried up in front vertically, as had been explained by Dr. Bradford. In this way it was far easier to avoid sores than by the old method.

Dr. Cheever asked if this apparatus had ever been adapted to the treatment of Pott's disease. Dr. Watson replied that a similar splint had been used for that disease, but without the ratchet extension. Dr. Cheever thought that by fixing the body and applying extension to the legs this same splint would be admirably adapted to the treatment of caries of the spine.

Dr. Bradford stated that although extension by the ratchet had never been utilized in treating Pott's disease, extension had been gained by fastening the patient's head to the head of the bed, which was raised, the sag of the body thus giving counter-extension.

Dr. Cheever thought the advantage so great of being able to carry a patient so conveniently as can be done on this splint either out-of-doors or wherever it is desired, as to merit its careful trial in case of spinal caries.

In reply to a question, Dr. Watson answered that the patient exhibited had worn the splint shown for six weeks without changing.

Dr. Hodges said the remarks of the evening showed the general distrust which surgeons have of any new apparatus, some unexpected part turning out to be defective, and provoking the unfortunate effects of pressure, and often in the last place where it would be suspected.

In regard to the objection that the iron sides would be a source of trouble, Dr. Watson said that children had been kept on them for months at a time without the slightest abrasion.

Dr. Bradford mentioned the necessity of the splint being wide enough to take its bearings entirely

[1] Vide page 84, this number of the Journal.

outside of the bony prominences of the tuberosities of the ischii. In using this apparatus for caries of the vertebræ it was often necessary to raise either end of the splint to keep the prominence of the spine from pressing against the bed.

DR. PUTNAM testified to the freedom from any results of pressure in the cases he had seen wearing this form of apparatus. He thought a great deal of the trouble in apparatus arose from their manufacture being left to the instrument maker instead of the surgeon seeing that each apparatus was adapted to the need of each particular case.

DR. E. H. BRADFORD read a paper entitled

THE SURGICAL TREATMENT OF INFANTILE PARALYSIS.[1]

DR. J. J. PUTNAM agreed with Dr. Bradford as to the importance of orthopædic treatment in infantile paralysis, and as to the incompetence of instrument makers to decide upon the nature of the apparatus which is needed, every case requiring special and prolonged attention. He had found that unless the paralyzed limbs can be kept in a good position, and the means secured to the patient of making a practical use of what little muscular power may remain to him, the various methods for increasing the nutrition of the muscles will be of little or no avail.

DR. BRADFORD said that it was difficult to compare the results obtained from tenotomy and stretching, as no two cases were just alike; they had seemed equally good, and it was with him more a question of expediency; in hospital practice he usually tenotomized, as time was saved thereby; in private practice, on account of the inconvenience of an operation, he stretched. The tendons usually requiring to be cut were the hamstring and the tendo-Achillis. Dr. Bradford had never met with any injury to the veins caused by stretching.

DR. H. O. MARCY read a paper entitled The Best Methods of Operative Wound Treatment, reserved for publication.

BOSTON MEDICO-PSYCHOLOGICAL SOCIETY.

WALTER CHANNING, M. D., SECRETARY.

THE Society held its eighteenth regular meeting at the house of Dr. G. F. Jelly, November 2, 1882, DR. GOLDSMITH occupying the chair.

DR. HENRY R. STEDMAN read the paper of the evening, entitled

A CASE OF ACUTE CHOREA, WITH PROFOUND MENTAL DISTURBANCE.[2]

In the discussion which followed this paper DR. COWLES asked Dr. Stedman about the physical condition of the patient. He replied that he was anæmic and reduced in flesh.

DR. JELLY asked if the paroxysms occurred at a particular time in the day. He asked because he had recently seen a case of mixed chorea and hysteria in a young girl, in which the twitchings generally came on at night and continued until large doses of sedatives had been administered. Reflexes were good in this case, but there was impairment of sensation, and she could not stand, in consequence of lack of muscular power. She improved under massage and tonics.

DR. TUTTLE recalled the case of a young man of about nineteen, who was brought to the city hospital, in which mental disturbance complicated chorea. This disturbance increased, the patient becoming quite violent, and dying of exhaustion.

DR. STEDMAN mentioned a case of violent chorea cured by chloral.

DR. DENNY said that during the last three or four years he had seen quite a number of cases of chorea in school-children. The teachers of these children first noticed irritability and want of self-control, followed by a certain degree of mental impairment, particularly in children who were naturally bright. These children were often easily frightened, sometimes crying without cause; occasionally they were exalted. In some cases there was no mental change. The pathology of these cases is obscure. It would seem to be explained by a want of equilibrium in the posterior cells of the spinal cord, also to lesion of the optic thalamus, or corpus striatum. He had taken particular pains to observe the order of the development of symptoms in upwards of sixty cases of chorea, occurring at the beginning of the attack, and found that they followed the order of the localization of the centres in the motor zone of the cortex. Chorea affects the whole cerebro-spinal system, and usually occurs when the body is undergoing development.

DR. GOLDSMITH said that the case reported was functional in character and of a very unusual type in regard to age, sex, family, individual history, etc. In his experience he had seen eight cases of chorea in adult insane persons, and in all but one of these the disease was limited to a small group of muscles.

DR. CHANNING read a few notes on the

MEDICAL TREATMENT OF INSANITY, WITH SPECIAL REFERENCE TO OPIUM.

DR. COWLES said his experience with morphia had not been satisfactory, and he rarely used it for its sedative effect.

DR. JELLY had found morphia useful in certain cases of melancholia with agitation, but it had otherwise disappointed him.

DR. TUTTLE had not seen a case improve under the use of morphia.

DR. DENNY said he did not now recall cases in summing up his experience from year to year, where opium had been of much benefit.

DR. STEDMAN thought that in some cases of melancholia with excitement, opium in small doses during the day was of benefit.

DR. CLOUSTON used little opium, preferring a mixture of bromide of potash and cannabis indica.

DR. GOLDSMITH said that the English preparation of cannabis indica seemed much stronger than that which we got in this country. He thought that opium was sometimes very beneficial in cases of melancholia with great distress and anxiety.

[1] Vide page 73 of this number of the JOURNAL.

[2] See page 76.

SWEET HOLMES!

DR. OLIVER WENDELL HOLMES has resigned the chair of Anatomy at Harvard University.

> Your health, dear "Autocrat!" All England owns
> Your instrument 's the lyre, and *not* "the Bones."
> Yet hear our wishes — trust us they 're not cold ones!
> That, though you give up bones, you may make old ones.
>
> *London Punch.*

PATHOLOGICAL SOCIETY OF PHILADELPHIA.[1]

C. B. NANCREDE, RECORDER.

CARCINOMA OF THE STOMACH, *continued.*

Case II. Scirrhus of the pylorus; symptoms simulating idiopathic anæmia.

F. R., aged fifty-four, white, German, resident of a healthy locality, but much exposed as lumberman during the winter. Addicted to constant use of spirits, malt liquors, and tobacco. Had a fever of six weeks' duration at the age of sixteen years, and eight years ago some pulmonary inflammation. Never had malaria or syphilis. Does not know cause of mother's death; seven brothers and sisters healthy; father died of old age; his own three children living and healthy. Admitted to University Hospital, December 20, 1878. During the previous winter had numerous gastric attacks, as shown by pain and loss of appetite. In the spring and summer he lost flesh and strength, and was subject to pain in the bowels and in the hepatic area, flatulence, pyrosis, and constipation, but never vomiting. On account of salivation, in June, he became especially debilitated. At time of admission weight one hundred and eighteen pounds, usual weight one hundred and seventy. Lies on left side perfectly apathetic, with the physical and mental processes slow of action. Extremities cold, very anæmic; conjunctiva and mucous membranes very pale; sclerotics pearly white; complexion of a sallow, dirty hue; palpitation of the heart, dyspnœa, and subjective ear noises were noted; temperature irregular; appetite poor; flatulence and pyrosis; pain and tenderness in epigastrium; no definable tumor, but a sense of induration; hepatic and splenic areas of dullness normal; no venous hum; heart sounds weak. Urine: specific gravity 1018; neutral reaction; albumen one sixth; no casts, bile, or sugar; phosphates not in excess. Blood: white corpuscles in excess, red greatly decreased in number. Ophthalmoscopic examination: slight retinitis; optic disk pallid; central artery dilated; venous blood paler than usual; absorption of choroidal epithelium, allowing choroidal circulation to be seen; macula healthy; no hæmorrhage throughout fundus; both eyes present the same appearances. A low typhoid state soon developed, with diarrhœa and excessive flatulence. For three days prior to death vomiting occurred. He died December 30, 1882.

Autopsy. — Stomach alone examined. It is to be regretted that the full record was lost. Stomach adherent to liver and transverse colon. Lesser curvature from pylorus half way to cardiac orifice, infiltrated with cancer, extending two inches over the anterior wall, and at the pylorus encircling the organ. Pancreatic and biliary ducts pervious; microscopically the growth was found to be scirrhous carcinoma.

Remarks. — On account of the profound anæmia and the absence of tumor and vomiting, idiopathic anæmia was considered. The examination of the blood and the condition of the eye ground, contra-indicated such a diagnosis. The normal size of the liver and spleen and the non-glandular involvement excluded leucocythæmia. It is to be regretted that the exact numerical blood count was not recorded.

In this case the lesser curvatuere was very much involved, and a distinct tumor was absent, quite the opposite of Case I.

[1] Concluded from page 62.

TUMOR OF BRAIN.

Presented by Dr. A. P. Brubaker for Dr. H. Leaman.

J. J., aged fifty-three, laborer. When first seen the patient was lying on his back, with head drawn backwards into the pillow, and complaining of stiffness and soreness in back of the neck. The mouth was widely opened and parched, and the breathing deep and heavy. He was in a semi-unconscious condition, from which, however, he could easily be aroused, but soon relapsed into his former state, which was attended by stertorous breathing. Speech and deglutition were both interfered with, but not abolished. There was involuntary passage of urine, but the bowels were constipated. Venereal ideas were excessive, but accompanied by complete impotence. Voluntary movements of the extremities and also the power of coördination were considerably impaired. Pulse and temperature were normal. Liquid food was taken with difficulty. His condition had been as described four days previous to my first visit on September 4, 1882. The symptoms gradually increased and coma supervened, which ended in death September 17, 1882. Following history was obtained from the family: Twenty-six years ago the patient was confined to bed with "nervousness" for a period of two years, when he passed a calculus about the size of a date seed; again, a month later, another smaller one atop. His bladder continued to give him more or less trouble up to death. He had his clavicle broken nineteen years ago, but there was no injury to the head. About sixteen years ago he was suddenly seized, while at work, with a severe headache, and became totally blind, which lasted for twenty-four hours. This was relieved by wet cups to back of the neck. From that time he was subject to what they called "shaking spells;" when standing there would be a violent trembling of the knees and shaking of the arms. These attacks occurred about once a month, and occasionally three or four times a day. They increased from year to year in frequency and severity, and appeared to be excited by high winds and storms. In February, 1882, he was seized with paralysis, beginning in the left little finger, thence gradually extending to the ring and middle fingers, until the hand became powerless, but was able to move his arm. Then followed a numbness in the outer side of the left side, attended by impairment of the power of coördination, so that on attempting to walk he was compelled to run to keep from falling. He frequently fell in the street, and had to be carried home. Last February loss of speech supervened, which lasted for one month; the patient then began to speak in monosyllables, after which speech gradually returned.

Autopsy. — Congestion of the entire brain. By removing it four or five ounces of serum ran from the cranial cavity. Brain substance seemed to be normal throughout. In the right fissure of Sylvius was embedded a tumor about an inch and a half in diameter, which was almost entirely concealed from view by the convolutions. It rested upon the convolutions of the island of Reil, completely disorganizing them atop. The inferior extremities of the ascending frontal and parietal convolutions were normal. The upper surface of the temporo-sphenoidal lobe was somewhat disorganized. The tumor apparently sprang from the pia mater.

Report of the Committee on Morbid Growths. — A section made from the tumor presented by Dr. Brubaker, and examined microscopically, showed that the growth was tubercular. Its histological structure is

seen to consist of fibrous tissue constituting a reticulum, the meshes of which are filled with lymphoid cells. These appearances are very distinct at the peripheral zone of the tumor, while the centre and inner zone are in a state of retrograde metamorphosis, presenting a very granular appearance, scarcely stained by the carmine. The blood-vessels are mostly obliterated, their lumen being filled with coagulated blood or granular débris.

ENLARGED LYMPHATIC GLANDS.

Exhibited by DR. W. H. PARRISH.

I show five lymphatic glands removed from the axilla of a patient whose breast I amputated about nine months ago. The case was then reported at the Obstetrical Society, and was published in the *Medical News* of July 8, 1882. The specimen was referred to a committee, and Dr. Beates made a microscopical examination and concluded that the growth was an adenoma that had undergone carcinomatous change. Of the enlarged glands presented this evening, three, about the size of an almond, were removed from the axilla, a fourth, of smaller size, from just below the clavicle, and the fifth from the side of the neck about an inch from the clavicle. The patient presents no cachexia. The specimens were referred to the Committee on Morbid Growths.

POLYPI FROM THE UTERINE CERVIX.

Exhibited by DR. W. H. PARRISH.

I also present this evening two small growths each about the size of the last phalanx of the thumb, removed to-day with a wire écraseur. On Christmas Eve I saw for the first time a patient of French birth, a teacher, apparently about thirty-five years old. When I entered her room she was in a state of syncope from hæmorrhage from the genitals. The hæmorrhage had, however, ceased. With the application of hot, wet cloths over the front of the chest, and by hypodermic injections of whiskey and aromatic spirits of ammonia, she in a few minutes revived, so as to be able to tell me that she had not menstruated for three months, when suddenly bleeding began from the womb, and continued during the day with an exacerbation just before sending for me. As the patient's condition was evidently a critical one, I asked the direct question if she had not had or was not having an abortion. She said it was impossible. I then learned that she was single, and forty-two years old. A digital examination showed an intact hymen, and a substance in the vagina that at first touch felt very like an embryo of about three months. But I soon recognized that it was a growth attached to the lower part of the cervical canal, and that there was another distending the cervical canal. The latter felt still more like an embryo or ovum, and in fact in the absence of the one in the vagina might have at first misled me into thinking that the patient was aborting. Slight traction on it soon showed that it was attached. There was no return of the bleeding, and to-day, with the assistance of Dr. M. O'Hara, I removed both the growths with the wire, and without etherization or the use of a speculum.

A remarkable feature of the patient's history is that she had always menstruated scantily, and at intervals of five or six weeks. Never before had she evinced a tendency to uterine hæmorrhage. I am confident that the patient was not pregnant. I presume that being virginal she is approaching the menopause.

NORFOLK, VIRGINIA, MEDICAL SOCIETY.

W. A. THOM, M. D., SECRETARY.

THE regular monthly meeting of the Society was held at the office of Dr. Thom, January 4, 1883, at eight P. M. The President, DR. ALEXANDER TUNSTALL, being absent, DR. SHEPHERD, the Vice-President, occupied the chair. There was quite a full attendance. After the usual business DR. F. B. STEPHENSON, U. S. N., present by invitation, read the following case: —

DEATH IN OLD AGE FROM CARDIAC SYNCOPE, WITH LESION OF BOWELS PRESENTING SYMPTOMS OF INFLAMMATION.

T. R., aged eighty-one years and six months, was a sailor, of robust constitution. He had left indirect inguinal hernia (caused by a fall, for which he had worn a truss since 1868) of considerable size. There was sound of left auriculo-ventricular insufficiency. He had good general health, had been able to walk several squares easily, do slight work about the garden, and go up and down stairs until one year ago. He then noticed a feeling as if "asleep" between the fingers of left hand, with subsequent slight sensory paralysis, which gradually involved the entire arm and shoulder.

December 4, 1882. Without known special exciting cause he this morning felt sensations of fullness, weirdness, heavy headache, in brain, more marked about calvarium. He spoke of occasional transitory pains in chest. The radial pulse was atheromatous. His bowels had been sluggish for years. He lay on couch this day, though able to walk about the room. The night previous he took a mild cathartic to relieve the usual constipation.

December 7th. The stools became frequent and slimy. He complained of general feeling of cold, and especially along the spine.

December 8th. The stools became bloody, with some pain in abdomen. He could retain nothing in digestive tract, a rectal discharge occurring very soon after swallowing liquid; solids he could not take.

December 9th. He became decidedly weak and haggard. Same condition of bowels maintains.

December 11th. Right arm became sensorially paralyzed, as the left. He used milk diet, with powdered ice and small portions of brandy. He complained of external and internal heat, the latter being relieved by the ice somewhat.

December 12th. There was difficulty in swallowing, apparently due to paralysis. Linseed tea, and that from the bark of slippery elm, was retained best by stomach. He took small quantities of corn starch and brandy, and powdered ice. Sense of taste became dulled; water was insipid. He could not sleep. Feeling of warmth in stomach he spoke of, which ice modified. The stools were painless, involuntary, bloody, and slimy. Urine was slight in quantity and highly colored. The radial pulse was more compressible. The system had received very little nourishment during the previous five days. He spoke rationally.

December 13th. At three o'clock A. M. he experienced a sinking. Death seemed very near. The mouth was drawn awry, lower right corner being depressed. At ten o'clock A. M. he was able to swallow small portions of brandy and water. He then had recovered the power of speech, which was lost during previous

hours. At three o'clock P. M. he talked rationally, though slowly, and with difficulty. He complained of internal warmth, and put his hands against those of callers to cool the feverish skin, though he had very little power in his arms. The radial pulse was more rapid and more compressible. He had occasional feeling of fullness and oppression in stomach, which was relieved when something within seemed to pass downward. The stools were involuntary.

December 14th. About eleven o'clock P. M. yesterday he insisted on sitting up. The moment he did so he died. Over the sacrum was a commencing bed sore. The rectum protruded about three inches.

Treatment had been symptomatic. Death was probably due to cardiac syncope. The symptoms of brain involvement, of cardiac disease, and of intestinal inflammation, merit thought when considering the influence of respective lesions in effecting the final result.

In the discussion following Dr. Stephenson's paper DR. SHEPHERD thought that death was due to heart clot; that a small clot in brain may have caused the diminution of nerve force in right arm.

DR. NASH related a case in his experience in which there was repeated coma, consequent on brain tumor, when he kept the patient alive several weeks by use of stomach pump. He spoke of cases of sudden fatal syncope in individuals convalescent from serious illness, instancing a death while at stool of a recovering pneumonitic patient. He had observed copious fluid discharges after large doses of opium. He stated the frequent occurrence of hypostatic congestion in the lungs in the convalescing stage of acute disease.

DR. SHEPHERD suggested that enervation might be aprimal cause of the bowel symptoms.

DR. STEPHENSON desired to know the opinion of those present on the following subject: Is this a case of senectus; are the symptoms of paralysis of muscles of deglutition and the intestinal complication directly consequent on the marasmus of old age and its subsequent weakness of nutritional power?

DR. THOM considered the weakness natural to old age the primal cause of these lesions, and, ultimately, of death.

DR. SUTTON was decidedly of opinion that old age *per se* may be a cause of death, independently of intercurrent or consequent disease; that, *pari passu*, loss of mental power or weakness of memory is as much a sign of senility as failure of muscular power or inability of digestion.

There being no further matter for discussion the Society duly adjourned.

Recent Literature.

A Guide to Therapeutics and Materia Medica. By ROBERT FARQUHARSON, M. D. Enlarged and adapted to the United States Pharmacopœia by FRANK WOODBURY, M. D. Third American edition. Philadelphia: Henry C. Lea's Son & Co. 1882. 526 pages.

The arrangement of the third edition of this well-known compendium is essentially the same as that of previous ones. The rules for prescribing, which form the greater part of the introduction, are excellent, and will be found instructive by every student.

In a work which does not pretend to be exhaustive the authors have been able to omit many botanical and pharmaceutical details, but in view of the space devoted to less important drugs more than two lines could have been spared for the therapeutics of apomorphia. Hydrobromic acid is not mentioned. It would have been well to have specified that the book is adapted to the United States Pharmacopœia of 1870. The additions made by the American editor are especially valuable. The book is one which has been and will continue to be much used by students and younger practitioners, but they should remember that it does not enable them to dispense with a more complete treatise.

A Manual of Medical Jurisprudence, Instructing how to Conduct Inquests and Post Mortems, and how to give Official and Expert Testimony before Courts of Law in Cases of Homicide. By C. H. VON KLEIN, A. M., M. D. Hamilton, Ohio. 1882.

This little pamphlet of thirty-five pages (including title-page and preface) should have been printed upon brown paper, with ragged edge and musty odor. Its author says, with some degree of truth, that "nothing of the kind has ever been published in this country." Of how much value it may prove to the forensic physician may be learned from one or two extracts:—

"Death is always the inseparable effect of a wound absolutely mortal." Page 22.

"*Analysis for arsenic.* A portion of the mass is to be mixed with a quantity of *suet and salt of tartar*, . . . and melted over a fire; if a reguline metallic substance is produced at the bottom it is clear that arsenic is contained in it."

"It may be inquired whether this metallic substance being melted again with *metals of a red color* turn them to a white; this is likewise proof of arsenic." Page 19.

Forensic medicine is a progressive science, and the publication of an old treatise of the eighteenth century under the guise of a modern work, with the plea of usefulness to the medical profession, is a species of literary quackery which deserves just censure.

Eighteenth Annual Catalogue of the Massachusetts Institute of Technology.

This catalogue shows the institute to be in a prosperous condition, and to be doing a useful work under able instructors. Course VII., consisting of three years, the details of which are given on page 40 of the catalogue, offers excellent preliminary training for young men intending subsequently to study medicine.

Transactions of the Thirty-Sixth Annual Meeting of the Ohio State Medical Society, held at Columbus, June 14–16, 1881. Also, for the Thirty-Seventh Annual Meeting, June 13–15, 1882. Columbus: 1882.

This is a volume of 375 pages, and reaches us some eighteen months after one of the meetings which it chronicles occurred. For this reason the portions of the book devoted to reports of progress on special subjects lose a certain amount of the value which they may originally have possessed. Other articles are of varying interest. Throughout the book are interspersed an unusual number of blank leaves, which are not, however, the most valueless pages it contains.

Medical and Surgical Journal.

THURSDAY, JANUARY 25, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

ANNUAL REPORT OF THE PRESIDENT AND TREASURER OF HARVARD UNIVERSITY.
1881–1882.

THE portion of this annual report of Harvard University emanating from President Eliot is of more than usual interest, which is saying not a little, as his presentation of any subject with which he concerns himself is always terse and vigorous.

In regard to the Medical School, we learn from the report of the dean that the whole number of students in attendance during the year was two hundred and fifty; during the first term two hundred and forty-six; during the second two hundred and thirty-five. Of these, one hundred and twenty-eight had a literary or scientific degree. There were ninety-five applicants for the degree of Doctor of Medicine, of whom eighteen were rejected. Seventy-seven passed the examination, and received their degrees.

The fourth class was composed of ten students, of whom nine passed the examination, five of these *cum laude;* three received hospital appointments; one took the ordinary degree of M. D.; one postponed graduation to become a candidate for a hospital.

NUMBER OF TERMS SPENT AT THE SCHOOL BY GRADUATES.

	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882
Spent six terms.	8	23	14 47%	25 69%	40 65%	41 86%	62 86%	39 89%	49 81%	79 91%
Spent five terms.	3	2	7	5 13%	9	4	2 2%	1 2%	6 10%	2 2%
Spent four terms.	8	6	6	4 11%	8	3	3 4%	4 8%	4 6%	4 4%
Spent three terms.	15	5	0	2 6%	1	0	2 2%	0	1 1%	0
Spent two terms.	7	8	3 10%	0	3	0	1 1%	1 2%	0	1 1%
Total graduated.	41	88	30	36	61	48	70	45	60	86[1]

[1] Includes nine students of the Fourth Class.

The foregoing table is given as showing the increasing recognition of the necessity of studying medicine where it can be taught.

"The remarks made in the last report with regard to the fourth year might be repeated in this. It is still too early to determine the results of this additional effort to improve medical education. We can only say that, if expressed intention of prolonging the term of study be an index of progress, progress has been made. The chief difficulty still remains; we are in competition with the hospitals, which claim an important number of the best students before they have completed a proper course of study."

The Dean of the Dental School reports twenty-one students in attendance. The standard of the school is high, and its training thorough, but it suffers from very pressing impecuniousness, so that its teachers serve absolutely without pay.

In regard to the new Physical Laboratory, the President says that: —

"The subscription of $75,000 for its endowment was made up during the past summer, and $22,000 were paid in by September 1st. The condition of the anonymous gift of $115,000, wherewith to build a suitable laboratory, having been thus fulfilled, the Corporation set about the preparation of the plans for the building, Mr. Alexander Agassiz having general charge of the undertaking as a committee of the Corporation. The professors and instructors in the department of physics have all given careful attention to the plans, and it is confidently expected that spacious, well-arranged, and thoroughly equipped laboratories, ample cabinets, and convenient lecture-rooms will be the product of their studies. The building will probably be begun in the coming spring."

The Museum of Comparative Zoölogy received very important accessions during the year.

The director of the Chemical Laboratory reports great activity there, not only as a place where elementary and advanced chemistry are taught to a large number of students, but also as a place of research, where the knowledge of chemistry is constantly extended by the diligent labors of professors, assistants, and students.

As was previously mentioned in our columns, some months since a professorship of Veterinary Medicine has been established in the university, and Mr. Charles P. Lyman was appointed to the chair. Since the opening of the current academic year a faculty of veterinary medicine has been organized, a course of instruction covering three years has been arranged, and in September, 1883, pupils will be received. The objects which the university had in view in organizing this new department were briefly these: —

To train, year by year, a few competent and trustworthy practitioners, and to contribute to the progress of a branch of science which deals with many questions of public health and with great pecuniary interests.

The following table exhibits in per cents. the occupations, or professional destinations, of twelve hundred and twenty-six recent graduates, the survivors of ten classes (1867–1876), as stated in the class reports issued (with one exception) three years after the year of graduation: —

	Law.	Medicine.	Theology.	Scientific.	Teaching.	Business.	Unknown & Miscellaneous.
Per cent. . . .	36	10	5	6	9	21	13

The President reviews at some length the controversy in the Board of Overseers with reference to the admission of women to the Medical School. It is unnecessary that we should revert to this again.

"Late in the year," President Eliot tells us, "the Faculty appointed a committee to consider and report upon the general subject of out-of-door athletic contests, and particularly upon the regulation of match games of ball. It was the elaborateness of the arrangements for match games of base-ball, and the frequency of those contests in April, May, and June which prompted this action on the part of the Faculty, but the inquiry at once took a wide range, and comprehended all the competitive athletic sports."

Subsequently a standing committee of three was appointed to regulate athletic sports. The investigations, conclusions, and regulations of these committees form, we think, perhaps, the most interesting part of this annual report, and we are forced by the crowded state of our columns to defer any extended notice of them to our next issue.

ANNUAL REPORT OF THE NEW YORK STATE BOARD OF CHARITIES.

THE sixteenth annual report of the New York State Board of Charities has just been presented to the legislature at Albany. The institutions subject to the visitation of the Board are of three classes: Those founded and supervised by the State, those supported and managed by cities and counties, and those under the control of incorporated benevolent associations. A large part of the work of the Board during the past year has been in connection with asylums for the insane. The State institutions have been generally inspected by the Standing Committee on the Insane, and frequent visits have also been made to them by special committees and members of the Board, while most of the city and county institutions have been visited by the commissioners of the respective districts, and by the secretary, who, under the direction of the Board, has made numerous examinations of the inmates and working of these institutions. The report states that the suggestions of the Board in regard to needed improvements or changes in modes of administration have generally been well received and acted upon, and that many improvements in the management and care of the insane, especially in the county institutions, have thus been effected during the year. The following details are given in regard to the institutions: —

The several State hospitals for the acute insane have capacity for 1600 patients. The Hudson River State Hospital and the Buffalo State Asylum are each planned for 600 patients; so that the completion of these institutions, according to their respective designs, would give a total capacity for the custody and treatment of 2200 acute insane, by the State. During the past year these institutions, it appears, had an average of 1302 patients under treatment, and the number in their care October 1, 1882, was 1311. It will thus be observed that they had an average excess of accommodations for 298 patients, during the year, and that they contained at its close spare room for 289. It is believed, therefore, that no further appropriations for the enlargement of the State hospitals for the acute insane are needed for the present. It appears that the State has asylum accommodations for 2150 chronic pauper insane. It is districted between the Willard and Binghamton asylums, and they receive this class only, the patients being transferred from time to time from county poor-houses and the several State insane hospitals. The per capita charge to the counties for the maintenance and care of the insane in these institutions, fixed by statute at the actual cost, was, the last fiscal year, $2.65 per week. The reports of the Willard Asylum show that from its opening in 1869, its accommodations have been taken by the counties as fast as made, and it is now practically full. The Binghamton Asylum has been opened less than fifteen months, and it had 285 patients in its care January 1, 1883; thus leaving room for only 85 more patients. According to the returns of the superintendents, there were 1956 chronic pauper insane in the various county poor-houses and asylums October 1, 1882. Of these, 1212 were in counties exempt from the Willard Asylum Act, and 744 in the other counties; in most of which little or no provision exists for their proper oversight and care. Upon the whole, the buildings in use for the chronic insane of the exempted counties are now in fair condition and comfortable. There is a tendency in the most of the counties, however, to put off making the needed improvements as they arise, and it requires constant watchfulness on the part of the Board to see that these are not neglected, and that a proper standard of care for the insane is maintained.

The condition of the insane of New York City has been carefully examined during the year by the New York commissioners, a committee of the Board appointed for the purpose. It was found that the accommodations for this class, especially in the men's department, were greatly crowded, and that they could not be well extended in the locality upon the islands, owing to the lack of sufficient lands. The committee, therefore, recommended the purchase of a farm outside of the city, and the erection of plain and inexpensive detached cottage buildings upon it, with a view to the removal of a part of the chronic insane to them; and the Board of Estimate and Appointment, as previously mentioned in the JOURNAL, has already made an appropriation for the purpose of carrying out these objects. This will give facilities for the out-door employment of the insane, and at the same time relieve the crowded condition of the present accommodations.

The State asylum for idiots, at Syracuse, had an average of 305 pupils under instruction during the year, and the custodial branch for feeble-minded girls

and young women, an average of 125 inmates. This institution has greatly relieved the poor-houses of this class, and as the rate of maintenance and care is only about the same as in these institutions, it can no longer be regarded as experimental. There are still considerable numbers of idiotic and feeble-minded young girls in the poor-houses, and it is recommended that the institution be extended so as to meet the requirements of all this class.

THE NEW HOME FOR INCURABLES AT BRIGHTON.

THE JOURNAL has on more than one occasion spoken of the desirability of an institution for the care of the incurably sick. They are necessarily numerous in a large city, and of equal necessity is it that a large proportion of such hopeless cases should happen among that portion of the community who are dependent upon their own labor for existence, and, in consequence, when disabled are thrown upon the charity of the world for support.

An ordinary hospital is by no means the proper place for such a class of cases, such an institution is rather intended for acute diseases, in which the event is soon decided; were its beds filled with patients whose malady must last for years it would deprive many times their number of acute cases of the advantages of hospital treatment.

Many of these invalids are equally out of place in an almshouse. They are often among our most worthy poor, whose misfortunes appeal most directly to our sensibilities, as they seem most truly the victims of a mysterious dispensation whose cause and whose object are past finding out. These are certainly a class of cases which every one who has had anything to do with charitable institutions has found it particularly hard to deal with. A savage nation might perhaps solve the problem by a blow on the skull, not entirely with a view to euthanasia, but because the victim had ceased to be productive. To a Christian nation such a course is forbidden, and rightly, for it finds use for those whose physical perfection has been blighted. What lessons of patient endurance, what sweet resignation is often found by the bedside or the arm-chair of the chronic invalid! Who cannot call to mind some white-haired sufferer, whose abode became a centre from which light and happiness was radiated throughout a whole community! To one who can recall but a single example of this sort it suffices to give an interest in the whole class of individuals who drag out weary years which bring no promise of amendment.

The recent establishment of a Home for Incurables will, we are sure, meet the approbation and encouragement of the community. Perhaps we should have been inclined to believe that such an institution would thrive better in connection with an older and well endowed hospital, for we are somewhat skeptical as to the propriety of the multiplication of small unendowed hospitals; but we are informed that the maintenance of the present institution is already assured for a series of years, and we believe that all interested in the establishment of such a charity may well look to the one now putting forth its claims, as the nucleus of what shall some time grow to be the much-needed shelter for this very interesting class of invalids. We understand the management have decided to limit the benefits of the hospital to those entirely dependent upon charity, as in this way they believe they will make the best use of their necessarily limited accommodations, which as yet are only open to those of the female sex.

TRUSTEES OF STATE LUNATIC HOSPITALS.

WHATEVER may be the qualifications of his successor, and we know nothing of them, in not reappointing Dr. C. F. Folsom as a trustee of the Danvers Lunatic Hospital Governor Butler has deprived that institution of very valuable and faithful services. Dr. Folsom has taken great interest in the hospital, visiting it very frequently, and serving it in ways open to any active and zealous trustee, securing to it by personal application the interest of many benevolent people, who have contributed generously to the entertainment of its inmates by furnishing a billiard table, piano, and large numbers of pictures, books, illustrated periodicals, etc. As an expert in matters connected with mental diseases, however, Dr. Folsom has been useful to the hospital in ways not open to non-medical trustees. He was largely instrumental in procuring the appointment of a board of visiting physicians, and his opinion and advice have been at the disposal of both trustees and superintendent on all medical matters.

Now, although it certainly is not desirable that the majority of hospital boards whose chief function is a financial supervision should be medical men, it quite as certainly is desirable that some expert other than the superintendent should have an intimate knowledge of the condition of the hospital, and be able to advise the trustees intelligently and with freedom from any personal bias when they take action on matters more or less professional in character, and therefore that such expert knowledge should be at least represented on these boards. Such connection of an expert with the boards of trustees of our lunatic hospitals is particularly desirable where there are no expert lunacy commissioners, and no intelligent expert opinions are accessible to trustees except those of the resident medical officers.

An honorable and competent expert acting as trustee, really secures to the State, so far as his hospital is concerned, more than the usual advantages of a paid lunacy commissioner, without expense. In such a case as that which furnishes our text it is not the outgoing trustee but the State's hospital which is the loser.

— Medical professor to raw student: "Where is the glottis?" "I don't know, sir. I think you put it on the shelf in the dissecting room with the rest of your surgical instruments."

MEDICAL NOTES.

— A writer in the *British Medical Journal* recommends hyoscyamin subcutaneously as a sedative for maniacal persons, and says that while hyoscyamus is without efficacy in such cases, the alkaloid will usually quiet the violent manifestations without leaving any disagreeable after-effects or arresting the secretions. The beginning hypodermic dose should not be greater than one fifteenth of a grain.

Another hypnotic, recommended as useful and free of injurious effects, is the tannate of cannabin (see *Practitioner*, November, 1882). Of sixty-three cases in which it was used for insomnia attending chronic diseases, good results were obtained in thirty-seven and moderately good ones in fifteen. The average dose is about five grains.

— We notice that a contemporary writer, speaking of the inhabitants of Murray Hill, says that none appear to have so secure a seat as the owners of patent pills. It is but natural. Other patented articles outlive their usefulness; pills never. Petroleum is a slippery vanity, real estate but a shifting sand. For permanence and stability, next to having your treasure laid up in heaven, put it into a proprietary medicine.

— The *Sanitary Engineer*, commenting on the difficulty of providing a proper water-supply for the large cities, says that New York, for instance, requires for the needs of its population the entire available rainfall over two hundred square miles of territory. The intrinsic difficulties of the subject are enhanced by the fact that the supervision of these gigantic works depends more or less directly upon municipal boards which are made up on no basis of scientific or business qualification but merely from political availability. For general inefficiency the *Engineer* awards the palm to Philadelphia, with New York a close second, and give to Boston the third place.

— It is claimed by a writer in the *Répertoire de Pharmacie* that linseed meal which has been deprived of its oil is superior to the ordinary ground seed for the making of poultices for the reason that the oil if present is so imprisoned by mucilaginous matter on the addition of warm water to the meal that it does not have any unctuous action on the skin, not even greasing the cloth; but that, on the contrary, by becoming rancid, it interferes with the proper soothing action of the poultice. So that when the oil has been removed the meal makes a lighter poultice and one less liable to cause unpleasant results than one made of the oily meal.

NEW YORK.

— There having occurred some unpleasant dissensions in the Medico-Legal Society, a new association, having for its object "the advancement and study of medical jurisprudence, and the attainment of a higher standard of expert testimony," was formed last month of a number of prominent members of the old Society not "in harmony" with its present management, as well as others of the medical and legal professions. The first meeting of the new body, which is called the New York Society of Medical Jurisprudence, was held at the Academy of Medicine on Thursday evening, January 11th, when the following officers were installed: President, George P. Avery, Esq.; Vice-President, J. S. Wight, M. D.; Secretary, N. E. Brill, M. D.; Financial Secretary, S. B. Livingstone, Esq.; Corresponding Secretary, J. F. Chauveau, M. D.; Treasurer, E. C. Harwood, M. D.; Trustees, Drs. T. C. Finnell, A. M. Jacobus, and C. S. Wood, and Messrs. George P. Avery, A. J. Delaney, and Max F. Eller. Prof. J. S. Wight, M. D., of Brooklyn, read a paper on the bearing of illusions and hallucinations on testimony, in which he gave a number of instances in which witnesses had testified in regard to things which they believed had actually occurred, but which had not done so in fact. The paper was discussed by Drs. Hammond, Spitzka, and others. The second paper of the evening consisted of a report of the case of Margaret Keppel, the Brooklyn child abductor, by Dr. Landon Carter Gray. In May last the writer was called to examine a woman, charged with stealing a small towel from her employer, as to her soundness of mind. He became convinced of her insanity, and she was acquitted on this ground. This was the same woman who, in August, startled the community by her abduction of a little girl in Brooklyn, and Dr. Gray gave many interesting details of her case, which he had had an opportunity of studying in jail since that event, and which had become considerably aggravated since his first examination in the spring. The new Society has a membership of over one hundred, and among the more prominent medical men interested in it are Drs. Meredith Clymer, J. S. Wight, Clinton Wagner, T. A. McBride, T. E. Satterthwaite, W. A. Hammond, Nathan Bozeman, T. C. Finnell, and C. S. Wood.

— Dr. John T. Nagle, registrar of vital statistics, has completed his statistical tables for the year 1882. During the year the actual mortality was 37,924, or 29.64 per 1000, in an estimated population of 1,279,560. Of deaths at the age of one hundred and upwards there were 13, between ninety-five and one hundred, 34, and between ninety and ninety-five, 61. The largest mortality in adult life was between the ages of thirty-five and forty years, namely, 1916. Under the age of five years there were 17,520 deaths, and of these 9867 were of children under one year. In 1881 the deaths of children under five years of age numbered 17,737. The total mortality in public institutions was 7449 against 7146 in 1881. The deaths from diarrhœal diseases were 4050; from scarlatina, 2066; from diphtheria, 1525; from measles, 913; from croup, 729; from whooping-cough, 658; from malarial fever, 540; from typhoid fever, 326; from smallpox, 259; from cerebro-spinal fever, 238; from typhus fever, 65; and from puerperal fever, 59.

— Although the mayor, in his message of January 1st, stated that there were no cases of typhus at that time in New York, so far as known, it seems that there were two or three cases of the disease in a tenement house in the eastern district of the city, which were mistaken by the physician in attendance for typhoid. Since then one of the patients has died, when

the autopsy, ordered by the health authorities, showed distinct evidences of typhus, and several new cases have developed. All the patients, with the exception of one, who was too ill to be moved, have now been taken to the hospital, and the premises have been thoroughly disinfected and fumigated. As strict a quarantine as possible is maintained in regard to the case still remaining at the house, which will also be removed to the Riverside Hospital at as early a date as practicable.

Miscellany.

A CASE OF MULTIPLE MALFORMATIONS.

THE *Glasgow Medical Journal*, January, 1883, reports an unusual case of complicated malformations in a child of healthy parents, who had had two well formed children. The infant in question, however, presented a large tumor connected with spina bifida, extreme talipes varus of both feet, absence of anus, scrotum, and of skin from the penis. In spite of these deformities the child lived several days. During this time the fæces were voided through the penis, and were not unusual in appearance. The penis was exposed to its root, where the skin was reflected on to the scrotum. The parts uncovered by skin were red, and exuded blood. There was no glans penis, and of course no prepuce, and the pendulous tip of the organ was curved around so that the urethral orifice looked backward. At birth the tip was black, suggesting a gangrenous process, but the blackness wore off, so that it was attributed merely to the action of meconium.

The child urinated, and though at first it was difficult to say whence the urine issued, and impossible to define exactly the urinary tract, the water was afterward observed to trickle down from a furrow or fold of the perineal skin, below, or posterior to, the root of the penis. It came from some opening or aperture so diminutive as to escape observation, about half an inch above, or anterior to, the normal situation of the anus. It trickled downwards perplexingly, totally deficient of that force which could cause a stream, and indicate the aperture. The urinary tract seemed quite disconnected with the penis, from which latter no urine was at any time observed to escape.

The urinary and fæcal apertures of exit were thus reversed as to position and organ, the structure which develops into the anal aperture in ordinary cases being solely the urinary aperture in this case, and that which is normally the urinary exit canal being here the only anal aperture, or at least the only channel whence the fæces escaped.

Above the pubes was an irregularly triangular space devoid of skin, terminated above by a crescentic border. This undoubtedly represented the bladder, which was covered with a thin abdominal wall, to be sure, but evidently showed an approach to the condition known as exstrophy. The navel, however, was present, and no urine exuded above the pubes.

The child died with symptoms which indicated that the immediate cause of death was connected with the cerebro-spinal tumor, though of course the imperfect exit for the fæces would have soon become a peril to life.

PAGET'S DISEASE OF THE NIPPLE.

DR. T. MCCALL ANDERSON, in the *Glasgow Medical Journal*, takes the ground (in opposition to Sir James Paget) that this disease is essentially of malignant nature from the first, and not a mere eczema which by constant irritation has developed a cancerous growth. He does not deny that such a connection may occasionally occur, just as syphilitic disease of the tongue may in time lead to cancer of that organ; but believes, with Dr. Thin, that Paget's disease is from the first demonstrable microscopically as "a slowly advancing cancerous change near the mouths of the lactiferous ducts, which at a very early stage leads to irritative effects in the superficial tissues of the nipple and surrounding skin, and eventually penetrates into the substance of the mammary gland." If this be true it is of course of great importance to discriminate from the beginning this disease from an eczema. The diagnostic points on which he relies are as follows:—

PAGET'S DISEASE OF THE NIPPLE.	ECZEMA OF THE NIPPLE AND AREOLA.
(1.) Occurs especially in women who have passed the grand climacteric.	(1.) Occurs especially in women earlier in life, and particularly during lactation, or in persons laboring under scabies.
(2.) Affected surface, in typical cases, of brilliant red color, raw and granular looking after the removal of crusts.	(2.) Surface not so red and raw looking, and not granular, but often punctated.
(3.) When grasped between the thumb and forefinger, superficial induration often felt, as if a penny were laid on a soft elastic surface and grasped through a piece of cloth. (Thin.)	(3.) Soft, and no induration.
(4.) Edge of eruption abrupt and sharply cut, and often elevated.	(4.) Edge not so abrupt, and not elevated.
(5.) Very obstinate, and only yields to extirpation or other treatment applicable to epithelioma generally.	(5.) Although sometimes obstinate, yields to treatment applicable to eczema.

SYPHILITIC INOCULATION AT ALGIERS.

THE *London Times*, November 9, 1882, gives an account of the deplorable results of vaccination with contaminated humanized virus among the military garrison at Algiers. The vaccination was ordered in accordance with the sanitary regulations. Two army surgeons operated. The vaccine matter was extracted from a couple of children under two months old, apparently in excellent health, and in whom the lymph appeared to be equally genuine and normal. Those vaccinated from one of the children presented no special incident, but the fifty-eight soldiers vaccinated from the Spanish infant developed in a few weeks the characteristics of an infection which could not be mistaken, — all were attacked with syphilis. The marks on the arm were troublesome, and the ulcerations were so threatening that the soldiers were, some ten weeks after the operation, sent to hospital. In a month all except six were dismissed, but they were soon compelled to return. The usual train of constitutional symptoms followed, as appears from the article, in every case where the individual had been vaccinated from the infected child.

THE SUBCUTANEOUS USE OF ETHER IN HÆMORRHAGE.

To see if injections of ether have any utility in exhausting hæmorrhages, M. Hayem[1] has been making experiments. He finds that when the hæmorrhage

[1] Journal de Médicine de Paris, 23 Decembre, 1882.

becomes grave there follow transient clonic movements, with some stiffness of the legs. The withdrawal of an amount of blood equal to one nineteenth of the body weight of dogs was always fatal, the only difference being in the number of minutes or hours elapsing before death.

A bleeding to the extent of one twentieth of the body weight was, however, recovered from in the case of most of the animals. Injections of ether had no noticeable effect in the dogs which had been bled to one nineteenth, with the exception of causing an excitation in the beat of the heart, but injection of defibrinated blood or serum prevented a fatal result in several cases.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 13, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Small-Pox.	Scarlet Fever.
New York	1,206,590	683	236	16.49	20.14	6.13	—	2.92
Philadelphia	846,984	390	149	20.74	10 75	10.24	2.56	2.82
Brooklyn	566,689	232	84	22.31	23.16	9.68	—	6.32
Chicago	503,304	220	—	18.70	—	7.75	2.28	2.85
Boston	362,535	187	46	14.42	12.21	8.01	—	1.60
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	270	105	50.00	5.92	8.88	30.71	3.33
Cincinnati	255,708	115	45	22.62	22.62	4.35	—	6.09
New Orleans	216,140	120	26	58.33	15.00	.83	10.83	.83
District of Columbia	177,638	68	28	11.76	14.70	1.47	—	2.94
Pittsburg	156,381	76	21	21.04	9.21	2.63	—	—
Buffalo	155,137	—	—	—	—	—	—	—
Milwaukee[1]	115,578	48	24	10.42	14.58	2.08	—	4.17
Providence	104,857	49	17	10.20	26.52	6.12	—	—
New Haven	62,882	24	4	37.42	4.16	—	—	—
Charleston	49,999	25	6	4.00	12.00	—	—	—
Nashville	43,461	15	1	20.00	20.00	—	—	13.33
Lowell	59,485	—	—	—	—	—	—	—
Worcester	58,295	25	15	8.00	12.00	4.00	—	—
Cambridge	52,740	15	6	20.00	20.00	13.33	—	—
Fall River	49,006	10	3	20.00	—	20.00	—	—
Lawrence	39,178	18	8	27.77	5.55	16.66	—	—
Lynn	38,284	15	7	13.33	6.66	—	—	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	15	7	6.66	—	—	—	—
New Bedford	26,875	—	—	—	—	—	—	—
Somerville	24,985	10	3	40.00	10.00	—	—	10.00
Holyoke	21,851	5	4	80.00	—	40.00	—	—
Chelsea	21,785	11	3	—	18.18	—	—	—
Taunton	21,213	7	0	14.28	14.28	14.28	—	—
Gloucester	19,329	12	3	8.33	8.33	—	—	—
Haverhill	18,475	5	1	20.00	20.00	20.00	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	4	3	—	25.00	—	—	—
Newburyport	13,537	7	0	—	42.86	—	—	—
Fitchburg	12,405	4	0	—	25.00	—	—	—
Malden	12,017	7	1	—	42.86	—	—	—
Seventeen Massachusetts towns	130,065	29	7	6.90	13.79	6.90	—	—

[1] Twenty-two deaths by hotel fire not included.

Deaths reported 2721 (no reports from St. Louis and Buffalo): under five years of age 863: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 579, consumption 386, lung diseases 368, diphtheria and croup 188, small-pox 113, scarlet fever 79, typhoid fever 56, diarrhœal diseases 39, whooping-cough 30, measles 29, malarial fevers 22, erysipelas 12, puerperal fever seven, cerebro-spinal meningitis four. From *typhoid fever*, Philadelphia 15, Pittsburg nine, Chicago five, Baltimore and Cincinnati four each, New York and Boston three each, New Orleans two, Brooklyn, District of Columbia, Providence, New Haven, Charleston, Nashville, Cambridge, Lawrence, Holyoke, and Gloucester one each. From *diarrhœal diseases*, New York 12, New Orleans seven, New Haven five, Brooklyn four, Boston and Baltimore three each, Chicago two, Cincinnati, Pittsburg, and Providence one each. From *whooping-cough*, New York nine, Cincinnati five, Chicago four, Pittsburg three, Brooklyn, Baltimore, and New Haven two each, Philadelphia, District of Columbia, and Milwaukee one each. From *measles*, New York 16, Philadelphia and Cincinnati three each, Lynn two, Boston, Baltimore, New Haven, Salem, and Holyoke one each. From *malarial fevers*, Brooklyn seven, New York six, Baltimore four, District of Columbia three, New Orleans two. From *erysipelas*, Baltimore four, New York three, Somerville two, Brooklyn, Boston, and Milwaukee one each. From *puerperal fever*, New York, Boston, Baltimore, Cincinnati, New Orleans, Pittsburg, and Somerville one each. From *cerebro-spinal meningitis*, New York, Philadelphia, Worcester, and Lawrence one each.

Two hundred and fifty-six cases of small-pox were reported in Baltimore; diphtheria 43, scarlet fever 22, typhoid fever eight, in Boston.

In 31 cities and towns of Massachusetts, with a population of 903,441 (population of the State 1,783,086), the total death-rate for the week was 21.58 against 19.84 and 23.36, for the previous two weeks.

The meteorological record for the week ending January 6th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
January, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 7	29.879	26	34	12	84	88	78	83	NW	SW	W	6	4	11	O	C	C	—	—
Mon., 8	30.092	25	31	18	73	82	88	81	NW	SE	N	6	5	7	F	O	O	—	—
Tues., 9	29.959	23	30	11	64	66	83	71	NW	NW	N	10	16	15	O	O	O	—	—
Wed., 10	29.644	11	17	4	80	89	89	86	N	N	N	27	22	12	S	S	O	—	—
Thurs., 11	29.941	15	20	7	58	78	67	68	NW	N	NW	15	8	7	O	O	C	—	—
Fri., 12	30 357	12	21	6	58	35	80	58	NW	W	W	13	17	8	C	C	C	—	—
Sat., 13	30.100	31	42	7	71	61	92	75	SW	S	SW	5	16	24	F	F	R	—	—
Means, the week.	29.996	20						75										48.00	.49

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OBITUARY. WALTER BURNHAM, M. D.

WALTER BURNHAM, M. D., died in Lowell, January 16, 1883, after an illness of five weeks, the exciting cause of death being gastritis.

He was born in Brookfield, Vt., January 12, 1808, being the son of Dr. Walter Burnham. He studied medicine with his father and with his brother, Dr. Z. P. Burnham, a pupil of Dr. Nathan Smith. He graduated from the Medical Department of the University of Vermont in 1829, and, after practicing in several places, settled, in 1833, in Barre, Vt., where he lived until his removal to Lowell, Mass., in 1846. For several years previous to this change he was treasurer of the Vermont State Medical Society. While living in Vermont he made many difficult surgical operations, laying the foundation of a reputation as a surgeon which extended throughout the United States and into Europe. But it was after his removal to Massachusetts that the work to which he devoted so much time and in which he so excelled was begun, — that of gynæcological surgery.

As an ovariotomist he was among the early advocates of the operation. His first case of removal of an ovarian tumor was in August, 1851, his last in March, 1882. During this period of thirty-one years he operated on about three hundred cases. The number is believed to exceed this, but the exact figures are not at present attainable. The per cent. of success is above seventy-five.

His first case of ablation of the uterus and its appendages, for fibroma of the uterus, was operated upon in June, 1853, and was the first successful case on record. The woman is still alive. He made this operation fifteen times, having three successes. His experience with these led him to doubt the propriety of the operation, save in selected cases.

As a general surgeon he was well known. Among his successful cases were two of ligation of the common carotid artery, and one single case in which, having a short time before ligated the right external carotid he ligated the left external carotid for a malignant tumor of the jaw, the growth being much retarded.

Among the services for which the profession in Massachusetts are indebted to him was the passage of the Anatomy Act, the bill of which he as a member presented to the House in 1855, and was influential in having passed. By it medical men were authorized to obtain the bodies of dead paupers for dissecting purposes. He was a member of the American and State Medical Associations and honorary member of various State Societies. He was also surgeon of the Sixth Massachusetts Regiment from 1862 until his resignation about 1870.

As a man, honorable and outspoken in his opinions; as a practitioner, of extensive research and careful observation, and of boundless charity to the poor seeking his aid, from whom it was never withheld; he was kindness itself to students and to men young in the profession, to many of whom, his former pupils, now distinguished men, knowing his great heart, the news of his death will come with a sense of personal loss.

MEDICUS.

APPOINTMENTS. — Dr. George H. Bixby has been appointed one of the physicians to the Out-Patient Department for Diseases of Women at the Boston City Hospital, in place of Dr. Chadwick, resigned.

William A. Dunn, M. D., has been appointed surgeon to Out-Patients at the Carney Hospital.

COMMITTEES ON PUBLIC HEALTH, WATER SUPPLY, AND DRAINAGE, OF THE MASSACHUSETTS LEGISLATURE.

THINKING it may prove of interest to our Massachusetts readers, we print the names of the members of the Legislature appointed on the above committees: —

Committee on Public Health.

SENATE.

Water R. Mason, of Middlesex.
James O. Parker, of Essex.
Dexter B. Hitchcock, of Hampden.

HOUSE.

Horace L. Bowker, of Boston.
David L. Ambrose, of West Newbury.
Frank W. Adams of Royalston.
I. Dwight Stowe, of Fall River.
Charles L. Randall, of Boston.
Henry B. Martin, of Milton.
Charles W. Donahoe, of Boston.
Alonzo J. Stetson, of Danvers.

Committee on Water Supply and Drainage.

SENATE.

James S. Allen, of Plymouth.
Henry J. Wells, of Middlesex.
James A. McGeough, of Suffolk.

HOUSE.

Benjamin F. Campbell, of Boston.
Charles Smith, of Andover.
Warren A. Bird, of Natick.
Arthur F. Whitin, of Northbridge.
William H. Sayward, of Boston.
John McLaughlin, of Boston.
Joshua T. Foster, of Medford.
Chester W. Kingsley, of Cambridge.

MIDDLESEX NORTH DISTRICT MEDICAL SOCIETY. — The quarterly meeting of the Middlesex North District Medical Society will be held at the St. Charles Hotel in Lowell, Wednesday, the 31st inst., at four o'clock P. M. A paper prepared by Dr. William H. Lathrop, of Tewksbury, on Incipient Mental Disease, will be read by the author. A paper on Typhoid Fever, its Causes and Treatment (not on Venesection, as previously announced) will be read by its author, Dr. Harvey Knight, of Lowell.

GEORGE C. OSGOOD, *Secretary.*

APPOINTMENTS OF TRUSTEES IN THE MASSACHUSETTS LUNATIC HOSPITALS. — Governor Butler has made the following nominations to the position of trustee in the State Lunatic Hospitals: Simeon Borden, of Fall River, reappointed, at Taunton; William Dickinson, of Worcester, in place of Rev. Mr. Moors, whose term has expired, at Worcester; John Bancroft, of Reading, in place of Dr. C. F. Folsom, whose term has expired, at Danvers.

Original Articles.

CASES OF INTESTINAL OBSTRUCTION TREATED BY MEANS OF THE RECTAL TUBE.[1]

BY J. FOSTER BUSH, M. D. (HARV.)

Case I. G. W., a detective policeman, was first seen by me February 21, 1882. He was suffering from abdominal pains, irregular in character, but severe. The abdomen was hard and tender to touch. Upon questioning, I found that he was habitually constipated and had not had a dejection for two days, and that on the night before he had indulged in a lunch of beer and cheese before retiring, and that a few hours after he was awakened by abdominal pain.

He applied hot poultices, took two large doses of tinct. rhei comp., followed by pulv. glycyrrhizæ comp. The pains increasing, he took, upon the recommendation of an apothecary's clerk, pulv. ipecac. comp. grs. x., following it up with Rochelle salts and Tarrant's seltzer aperient.

When I saw him he had experienced some nausea, but had not vomited, and he complained of feeling cold in his bowels.

I ordered a large rectal injection, turpentine stupes to the abdomen, a tablespoonful of "Warburg's tincture" in warm water, to be followed by liq. morphiæ sulphatis, one drachm every half hour till he obtained relief. Four hours later I again saw him. He was experiencing excruciating pains, abdomen tympanitic and generally tender, and a particularly sensitive indurated mass was found in the region of the transverse colon on the left side. Another large rectal injection was given without obtaining relief, therefore I administered morphia, giving within an hour and a half three subcutaneous injections of half a grain each, after which he was free from pain, but did not obtain sleep.

On February 22d I found him with a high pulse and temperature, tender and tympanitic abdomen, and a recurrence of the pain. Vomiting was a constant symptom, and the tongue was brown and dry. There was mild delirium. A dose of castor oil combined with opium was given, to be followed by a large rectal injection of molasses, olive oil, turpentine, and soapsuds; the hips to be raised on an inclined plane while the injection was being given. The pain and vomiting increased, and the injection came away clear.

The only sustenance given was cracked ice and clear coffee in small quantities often, which was well borne.

There was retention of urine, which required the use of the catheter. Hot flax-seed poultices were applied to the abdomen, and three quarters of a grain of sulphate of morphia was given subcutaneously.

On February 23d he felt comfortable, and there was reduction in both pulse and temperature. There were constant eructations, but no vomiting. The abdomen was less tympanitic, and on deep pressure gurgling could be felt. The only tenderness was in the neighborhood of the induration previously spoken of. Only one subcutaneous injection of a quarter of a grain of morphia was necessary.

The next day, February 24th, Dr. H. H. A. Beach saw the patient in consultation, and coincided in the opinion that continuation of the rectal injections was the best course to pursue, large quantities to be given, and in order to have it reach as near the spot as possible he recommended that a rectal tube should be used, that morphia enough to quiet pain was to be given.

I obtained one of the Davidson Manufacturing Company's red-rubber stomach tubes twenty inches long, the exterior of which is as smooth as glass. This I introduced its full length, the patient lying upon his left side, and threw into the colon a large injection, which, when it came out, was found to contain fæcal matter with a highly disagreeable odor.

On the 25th there was less constitutional disturbance. Two injections were given through the tube, each of which brought away fæcal matter, but only in small quantities. His nourishment consisted of Valentine's beef juice in small quantities, often, homemade beef tea, and clear coffee. He experienced no pain except over the colon, the stomach doing its duty well, and there being little tympanites. Half an ounce of sulphate of magnesia, with half a grain of socotrine aloes, was given in equal parts of syrup of ginger and peppermint water.

On the 26th Dr. Beach again saw the patient in consultation, and advised a continuance of the injections, and a repetition of the salts combined with aloes. The only objection to the tube used was that the holes being on the side the flow of the injected water was obstructed; therefore we tried a piece of the common white tubing open at both ends. This was introduced twenty-four inches, and an injection given, but the exterior of the tube was rough in comparison to the red, and caused so much pain that we had to discontinue its use. Two injections were given on this day with the same results as on the day before.

The 27th found him in the same condition, save that he voided his urine voluntarily, the use of the catheter having been necessary till this time.

Early on the morning of the 28th I had given him another dose of the salts and aloes, to be followed in two hours by an injection given as usual. Upon the return of the injected water white particles resembling cheese were noticed, and also a substance which I did not see, but which, according to the statement of the patient's wife, must have been mucus, as it "looked like jelly." As the patient thought he felt wind pass through the bowels, ol. ricini, in teaspoonful doses, was ordered to be given every three hours unless nausea or pain was produced; only one dose was given, however, as the patient felt distressed from it.

On March 1st Dr. Beach again saw him. The constitutional symptoms were good. He had no pain. In the sediment from the injections fæcal matter and mucus were found, and floating on top of the water were fat globules, and as no oil had been given per rectum for a number of days it was thought that the particles seen might have come from the oil administered the day before. It was decided to continue the injections, using glycerine and water, and to give per ora

℞	Ol. ricini	ʒi.
	Glycerinæ	ʒij.
	Tinct. opii comp.	ʒi. M.

every three hours, unless gastric disturbance or abdominal pain was created. The injection of the glycerine was followed by tenesmus. Four doses of the mixture were given before inducing any action, but the fifth was followed by expulsion of flatus, followed by a dejection, which was shortly followed by a second, of watery character, with mucus and pus, and small hard masses, in one of which was the presence of a sub-

[1] Read before the Boston Society for Medical Observation, November 20, 1882.

stance resembling potato, very smooth on one side and rough and irregular on the other, as if it had been detached from the outside of a mass. This fæcal matter was the first of any distinct form passed.

On March 2d more fæcal lumps passed. There was no pain, but there was local tenderness at times. From this time onward recovery was rapid.

The highest pulse was 120, and the highest temperature shown by the thermometer was 103.4° F.

CASE II. J. R., an American, aged thirty, had always enjoyed good health, but was habitually constipated. On September 14, 1882, he ate heartily of corned beef and cabbage. That night he was taken with abdominal pain, which was referred to the region of the ascending colon. He took a dose of castor oil, followed it up with rhubarb, and later on took laudanum, without experiencing any benefit.

On September 16th I saw him. The pain was intense, the abdomen was tympanitic and tender, and there was vomiting whenever any food was taken. The temperature was 102° F., the pulse 120, and the tongue dry. I gave half a grain of the sulphate of morphia subcutaneously, ordered fomentations to the abdomen, and directed that a large rectal injection of warm water should be given, and morphia enough, in the form of suppositories, to relieve pain.

On September 17th there was delirium, the abdomen was greatly distended, the temperature 104.2° F., the pulse 140, and the tongue brown and dry. Vomiting was frequent and eructation was constant. Retention of urine required the use of the catheter.

The injection of the day before having come away clear, I introduced the long Davidson tube, as mentioned in the previous case, and injected about three quarts of hot soap-soads. Hard, dry fæcal masses came away with a return of the injection, but the pain and tympanites were not relieved. Vomiting still continued. I gave a subcutaneous injection of half a grain of the sulphate of morphia, and ordered the suppositories to be continued *p. r. n.*, and gave cracked ice and clear coffee for nourishment. The pulse and temperature still remained high.

On September 18th I gave through the tube another large rectal injection of soap-suds, sweet oil, and molasses. The fluid upon its return contained fæcal masses similar to those of the day before. Flatus escaped soon after, and the intense pain subsided, though general tenderness continued. I gave a mixture containing

R Magnesiæ sulphat	℥ ss.
Syr. zingerberis	℥ i.
Aq. ment. pip.	℥ ss.
Aq.	āā ℥ iv.

to insure complete evacuation of the bowels, and directed that a teaspoonful of the compound licorice powder be taken every night.

A week later the patient had a sharp attack of pleuritis, which confined him to the house for a time, but there had been no return of the abdominal pain or constipation, the powder producing a good effect.

CASE III. J. R., on Sunday, September 24, 1882, went out into the country for a day's pleasure, and while there ate largely of "choke cherries."

On September 26th he was unable to perform his work, that of a mason, on account of abdominal pain, for which he took fluid extract of senna and castor oil. When I saw him he located the pain as being on the right side of the abdomen and extending along the line of the colon. Local pressure produced pain, but no induration was found. There was no elevation of the temperature and no vomiting. I gave a saline cathartic combined with twenty drops of laudanum. Four hours later I found him in great pain, the extremities were cold, and the abdomen was tympanitic and exquisitely tender, the slightest pressure producing pain. There was vomiting. A half a grain of the sulphate of morphia, given subcutaneously, relieved the pain; fomentations to the abdomen were employed, and a rectal injection of laudanum and starch was to be given every three hours if there was a recurrence of the pain. Coffee and ice, as in the other cases, was the only food given.

On September 27th I gave through the tube a large rectal injection, which came away without fæcal matter. There was less tympanites and pain, but there was stercoraceous vomiting, and retention of urine, though the pulse and temperature were not much above normal. A second rectal injection was given, with a like negative result.

On September 28th his condition was unchanged; the pain and tympanites were not great, but the vomiting was still fæcal in character and quite fetid. The patient felt flatus descend to a certain point and then stop; he declared that it was at the entrance of the rectum, but such was not the case. A large rectal injection was given, the tube being used, but the fluid did not return for some time, and when it did it was very offensive.

On September 29th a large rectal injection was again given, and this time dark, hard, fæcal balls were expelled. They were covered with bloody mucus. Flatus escaped, at first in small quantities, the patient saying it seemed as if it came through a pin-hole. The patient having had a strong craving all day for beer, a glass of it was given, and it acted as a mild purge.

On September 30th a saline cathartic was administered. Since then there has been no trouble.

It will be noticed that in the first and third cases the exhibition of cathartics was followed by an exacerbation of pain and discomfort, yet none of this class of drugs were administered till the inflammatory symptoms had apparently subsided.

Remarks. — These cases are reported to show the use of the rectal tube, by which means the fluids injected can be carried well up the bowels and brought near the disease; and one who has not tried this means can form no idea of the ease with which the tube is introduced, the patient often not feeling its introduction.

In two of these cases the patients asked me, after the tube was introduced, not to hurt them, they not having felt its passage beyond the sphincter ani.

Exactly how far an injection may be made to penetrate has for a long time been under discussion. From some experiments performed on the cadaver it was shown that water could be made to pass beyond the ileo-cœcal valve. Others claim that though in death the fluid may be made to penetrate beyond this point, yet in the living subject under normal conditions the tonicity of the valves prevents the passage beyond to the small intestine. Upon this subject Leichtenstein, in Ziemssen, says: "If we wish to act directly with enemata upon incarcerations or invaginations in the lower part of the ilium it is advisable to relax the ileo-cœcal sphincter by chloroform narcosis or by large doses of opium, so as to open the way for the injected

water to reach the point of occlusion. But not only under these circumstances, but also when we wish to reduce a twist, knot, or invagination of the colon by enemata, it is advisable, for more than one reason, to aid the operation by previously bringing the patient under the influence of opium." Concerning the penetration of fluids beyond the cœcum a recent writer on rectal alimentation mentioned the case of a patient who had taken no nourishment by the mouth for some time, who lived on rectal injections of beef tea, and in whose vomitus particles of beef tea were found.

These cases tend to show to what extent the intestinal canal can be distended without injury either to the structure or functions.

In order that the injection may do the most good possible the patient must bear patiently with a little discomfort, for it is as much the hyperdistention of the parts as the solvent action of the water that causes relief.

In the cases reported numerous injections were given, but one was never repeated till the patient had recovered from the unpleasant effects of its predecessor.

In the first case mentioned the only time the injections were suspended for any length of time was when pain and intestinal spasm had been created, and whenever this is done, or whenever we have fear that the intestinal structures have been weakened by inflammation or ulceration, of course the injections would be contraindicated.

Distention from below is not a new method, and other means than fluids have been employed. Air, for instance, has been forced in by means of a pump or bellows, or by chemical action, as by the injection of an alkaline followed by an acid solution. These last have only to be mentioned to be discarded, for they have not the soothing or relaxing properties of the water, which also exerts a force directly proportionate to the bulk employed, by reason of its compressibility and by its being regulated at will.

OBSERVATIONS ON THE MANAGEMENT OF ENTERIC FEVER ACCORDING TO A PLAN BASED UPON THE SO-CALLED SPECIFIC TREATMENT.[1]

BY JAMES C. WILSON, M. D.,

Physician to the Jefferson Medical College Hospital, and to the Philadelphia Hospital.

I DESIRE to lay before the college a plan of managing enteric fever, which I have employed during the past year, and which, tested by such uncertain but not necessarily fallacious means as are available for a limited series of cases, has yielded satisfactory results.

The object of this communication will, I believe, be best attained by first sketching in outline the plan of treatment itself, next by reviewing the considerations which led to its adoption, and finally by a brief study of the cases. This arrangement of the topics will enable us to economize time.

The Plan of Treatment. — The scope of this paper and the necessity to be brief debar me from the consideration of the general management of the patient, dietetics, the treatment of complications and sequels, and of the prophylaxis, and restrict me, in the main, to the subject of the management by medicinal means. It is, in fact, this part of the treatment that, superadded to the so-called rational and expectant method in general use in this community, differs from the common practice, and constitutes the plan in question.

So soon as the patient is found to have enteric fever, or, in many instances, so soon as his symptoms warrant a reasonable suspicion that he is about to develop it, he is put to bed, ordered a diet consisting of milk, animal broths, jelly, and simple custards, in small amounts, and at intervals of two or three hours. At night he is given a dose of calomel. This dose varies in amount from seven and one half to ten grains (0.5 to 0.66 gramme), and is repeated every second evening until three, or, rarely, four doses have been administered in the course of the first six or eight days. It is given alone or in connection with sodium bicarbonate. There is commonly a slight increase of diarrhœa, if it be present, without aggravation of the other symptoms, and in some instances the tendency of the temperature at this time to steadily rise appears to be controlled. If, as is frequently the case, spontaneous diarrhœa has not recurred in the first week, the calomel usually brings about two or three large evacuations on the day following its administration, not more. In either case the tendency to frequent passages in the later stages of the attack is favorably influenced by the repeated administration of this drug during the first week. If the case does not come under observation until after the tenth day, one only or at most two doses of calomel are given. No further doses of it are, however, given during the course of the attack unless constipation occur. In this event, if the evidences of extensive or deep implication of the intestinal wall, such as abdominal pain, tenderness, or marked tympany, are absent, calomel in seven and one half grain (0.5 gramme) doses is given at intervals of three or four days. If there is reason to suspect serious intestinal lesions the lower bowel may be more safely emptied of its contents every third or fourth day by enemata of moderate size (eight to ten fluid ounces). It is necessary to bear in mind that the gravest lesion of the gut, leading even to hæmorrhage and perforation, have occasionally been observed in cases characterized not only by constipation but also by an entire absence of pain or tenderness, and very moderate tympany. The danger of salivation from calomel in these doses in enteric fever appears to be slight. In only one case in sixteen were the mercurial fetor and slight swelling of the gums observed.

Excessive diarrhœa has been controlled by the use of opium, either in suppositories containing one grain (0.06 gramme) or by the mouth in quarter grain (0.016 gramme) doses, often associated with bismuth and given *pro re nata*. It is an invariable rule that the patient be kept in the horizontal position, and to the use of the bed-pan and urinal from the time of the recognition of the disease until defervescence is completed. He is, however, turned upon his side from time to time, and made to maintain that position for twenty or thirty minutes, if necessary, being supported by the nurse.

From the beginning of the attack the following mixture is regularly administered in doses of one, two, or even three drops in a sherry glassful of ice-water, after food, every two or three hours during the day and night: —

℞ Tinct. iodinii . . . . . f℥ij. 8.00 cc.
Acid. carbolici liq. . . . . f℥ss. 4.00 cc. M.

[1] Read January 3, 1883.

Unless some unusual circumstance occur to render a change necessary, this medicine is not suspended until the attack draws to a close. It is well borne by the stomach, and excites no repugnance on the part of patients. In one case only has it been necessary to omit the carbolic acid on account of the disgust occasioned by its odor.

Partly for the sake of its favorable influence upon the skin, and for the sake of cleanliness, partly because of its favorable though slight influence upon the temperature, the patient is to be sponged twice a day with equal parts of aromatic vinegar or alcohol and cold water. If it is more grateful to him this sponging may be done with tepid water, the evaporation of an extensive film of water, not below the temperature of his body, probably being not wholly without a refrigerating tendency.

When the evening axillary temperature reaches 104° F. (40° C.) quinine in massive doses, twenty-four to thirty grains (1.66 to 2.00 grammes) is given upon a falling temperature. I usually direct eight to ten grains to be given in solution at five, at half past five, and at SIX A. M. the following morning. Administered thus at the decline of the temperature in its diurnal revolution, these large doses of quinine depress it from 2.5° F. to 3.5° F. (1.4° C. to 1.8° C). After the lapse of forty-eight to seventy-two hours, if necessary, the dose may be repeated. If these doses be rejected by the stomach, — an unusual circumstance, — half the quantity of quinine may be administered hypodermically. For this purpose a citric acid solution is to be preferred. Since the adoption of the plan of treatment under consideration I have not encountered cases attended with such hyperpyrexia as has rendered attempts to control it by cold baths necessary or even advisable.

The minor nervous symptoms are best held in check by skillful nursing. For the relief of the headache of the first ten days absolute quietude, a dim light, etc., are often sufficient; occasionally the bromides alone or in combination with chloral are required. Later in the course of the disease chloral is unsafe. From the end of the first week the patient cannot be left unattended even for a few minutes without risk. Persons in whom delirium was only occasional and transient have, in many instances, destroyed themselves during the momentary absence of the nurse.

Alcohol is not often indicated prior to the beginning of the third week. It may, however, by reason of the habits of certain patients, be necessary throughout the attack. Although forming no essential part of the treatment, it is commonly administered in varying though usually small amounts towards the close of the sickness. Some patients do well without taking it at all. It is of course administered in accordance with well-understood indications upon the supervention of delirium, ataxic symptoms, and the evidences of failure of the forces of the circulation. The patients are carefully watched well into convalescence, and cautioned against too soon regarding themselves as restored to health. The dangers of the establishment of a focus of contagion are guarded against by the systematic, thorough disinfection of the stools immediately after they are voided.

The considerations which led me to adopt the plan of treatment indicated in the foregoing sketch are: —

(1.) A feeling of dissatisfaction regarding the expectant method of treating enteric fever. This feeling, vague at first, grew more definite and stronger with increasing clinical opportunities, and a fuller knowledge of the natural history of the disease, until it became a motive, impelling me to cast about for some different and more satisfactory plan. This feeling has been during the past decade a very general one in the profession in all parts of the world, as is attested by an almost endless succession of journal articles setting forth new plans of treatment, and the use of new drugs in the management of this, the most common and most important of the acute infectious diseases of the present epoch in medical history. Most of the plans thus suggested have lead to disappointment when tested by the fuller observations of the profession; many of them have failed to attract general attention, and some few are still *sub judice*. Their number and diversity bear witness to a wide-spread distrust of the once well-established expectant treatment. This distrust is, however, based upon something more tangible than a mere feeling of dissatisfaction. The statistics of all observers whose cases have been sufficiently numerous to be trustworthy show enteric fever to be, when treated by the expectant plan, a disease of high death-rate.

The percentage of fatal cases rarely falls below 15 per cent., and often exceeds 25 per cent., according to the hospital records of this country, Great Britain, and Continental Europe. Jaccoud, with a collection of 60,000 cases, observed a mortality of 20 per cent.; Murchison, in 27,051 cases, 17.45 per cent.; Liebermeister, in 1718 cases, at Basle, under an expectant plan, records 27.3 per cent. of deaths. But turning from broad generalizations to personal experience, who is there here that, many times elated by the happy issue of mild or average cases treated by the expectant plan, has not realized the sense of utter powerlessness attending it when he has stood face to face with cases in which *to do* rather than *to wait* has been necessary to save life.

(2.) Enteric fever is the very type of the general diseases, of affections *totius substantiæ*. The tissues are universally implicated in the morbid processes; no function of the body wholly escapes perturbation. For this reason plans of treatment suggested by the prominence of certain groups of symptoms, or by the known lesions of particular organs, even though of undoubted benefit as far as they go, are in theory unsatisfactory because they are directed in effect against conspicuous manifestations of the cause of the sickness rather than against the cause itself.

Whilst in actual practice the treatment by turpentine, by alcohol, by opium with lead, or the silver nitrate, or by agents capable of controlling the febrile movement, as quinine, digitalis, salicin, and the salicylates, even the cold-water treatment itself, although at times and in the hands of certain clinicians showing favorable results — all these have failed of general acceptance on the part of the profession.

(3.) The general character of the disease, the specific nature of its cause, the unsatisfactory results alike of an expectant and of a symptomatic plan of treatment, or rather of the two combined, have united to render the idea of a specific treatment, a true cure for enteric fever, a most attractive one, to stimulate thoughtful observers to renew again and again the disappointing search for it. To this idea may be traced the treatment by the mineral acids, by chlorine-water, by carbolic acid, by quinine alone, by quinine and digitalis, by iodine, by the potassium iodide, by calomel.

(4.) Not only is the conception of a specific treatment for specific diseases a most attractive one, and the attainment of such a treatment for enteric fever brought within the bounds of a reasonable hope by the analogy of syphilis and the malarial diseases, but the search after it with due caution and judgment has also the warrant of the very highest medical authority.

Passing by some earlier names, I refer to DaCosta, who has said: "It would be as illogical as absurd to suppose that we shall never possess the coveted means really to cure the continued fevers. Doubtless to the physicians of the time of Charles V. the radical and specific treatment of the malarial fevers appeared as hopeless and remote as the radical and specific treatment of the continued fevers appears to the scientific inquirer of our day."

I refer also to Liebermeister, who treating about eight hundred cases, part with calomel, part with iodine, had with the former drug a mortality of only 11.7 per cent., with the latter of 14.6 per cent. against 18.3 per cent. for cases treated without those remedies, but in other respects upon a similar plan.

Bartholow has also spoken in favorable terms of the treatment by iodine in combination with carbolic acid.

The treatment adopted is thus seen to consist of the use of the two remedies that are proved to exert a favorable influence upon the disease, iodine and calomel, with the addition of carbolic acid in minute amounts. I am aware that no positive conclusions as to the efficacy of particular plans of treatment can be deduced from a limited series of cases. I am also aware that few acute diseases show greater variations in intensity and in the percentage of mortality at different periods, and under different circumstances, than enteric fever. Nevertheless I have ventured to occupy your attention with this subject to-night because the results of the treatment encourage me to hope that its discussion in this way will lead to its trial on a more extended scale. That it amounts to a specific treatment in the narrow sense is not affirmed. It is tentative, provisional, but it is nevertheless to be regarded as a contribution to the subject of the specific treatment of enteric fever.

The *total number of cases treated* by this plan is sixteen; all recovered, one being now in the second week of convalescence.

Of these, eight were severe, the temperature reaching or exceeding 104° F. (40° C.).

Of these eight severe cases, one was characterized by uncontrollable vomiting in the third week. The patient retained no food taken by the mouth for five consecutive days.

One case was very irregular in its course, and was complicated by an obscure abdominal abscess which discharged by the bowel. The temperature in this case on two occasions attained 105° F. (40.5° C.). This case presented the characteristic eruption of enteric fever.

A third case was prolonged by a severe relapse.

Of the eight cases in which the observed temperature did not at any time attain 104° F. (40° C.), and which were therefore looked upon as medium or mild cases, one was complicated by crural phlebitis, and another by the occurrence of intestinal hæmorrhage.

The average duration of the eight severe cases was about thirty-one days; that of the eight mild and medium cases was about twenty-five days.

Of the whole number ten were treated in hospital, six in private practice. All from the time of their coming under observation were under my personal care.

In two cases the special plan of treatment was abandoned about the beginning of the third week on account of the supervention of unusual symptoms of great gravity. These related respectively to gastric irritability and an obscure abdominal abscess.

These sixteen cases are unfortunately not a consecutive series. During the year in which I have had the opportunity of observing them, two other cases of enteric fever have occurred in my hospital practice in which this plan of treatment was not employed. One was that of a man suffering from rheumatism, who, after a stay of several weeks in the wards, and in a bed near that occupied by a patient very ill of enteric fever, was observed to be febrile, and to have the typhoid eruption. This person, previously greatly reduced, was not regarded as a suitable subject for a special treatment, the efficacy of which was not yet established in my mind. The other was a man who, with an obscure history of a sickness of many weeks, and a very irregular temperature, developed the typhoid eruption, and within forty-eight hours had general peritonitis. These two fatal cases have, however, no bearing upon the result of the treatment.

In private practice several cases of mild, continued fever, of long duration were treated upon this plan during the past winter. I believe them to have been anomalous cases of enteric fever, but as the rose spots of that disease were absent, and their departure from the typical disease was wide, I have not included them in the above collection of cases treated. They all recovered.

The result of this plan of treatment has not only been satisfactory in respect of the recovery of all the cases treated, an accidental circumstance not liable to mislead persons familiar with the disease, but it has also been satisfactory in respect of the general course of the attack, and the appearance of the patient. These were in the main, despite the severe type of the disease in several of the cases and despite the occurrence of grave complications, favorable. I make this statement with due regard to the personal equation, and with no willingness to permit the observed fact to differ from the actual fact, for I desire any who may make trial of this plan to be more favorably impressed with the results of it than they have been impressed with my account of it.

After the reading of the preceding paper: —

Dr. George Hamilton spoke of the great importance of preventing hypostatic congestion by changing the position of the patient from time to time. This was one feature of the plan of treatment recommended some time ago by Dr. William Pepper, in typhoid fever, by which he obtained the unequaled result of ninety-eight per cent. of recoveries. He was not, however, at this time able to recall in detail the method of treatment.

Dr. J. T. Eskridge stated that the treatment to which Dr. Hamilton referred consisted in the administration of nitrate of silver, and was that which had been introduced by the late Dr. J. K. Mitchell some years ago.

Dr. Roberts Bartholow said that the plan of treatment of typhoid, advocated in the very interesting and able paper just read, is, as all present probably know, in part, the so-called "specific" method. The administration of calomel in full purgative doses dur-

ing the first week serves a double purpose: it has an effect on the range of temperature, and it acts on the typhoid germs present and multiplying in the intestinal canal. The use of iodine, — usually Lugol's solution, — throughout the disease, is also one mode of the specific treatment. By the use of this medicine it is attempted to prevent the multiplication of germs in the intestine, to check fermentation, and to maintain an antiseptic action in the blood.

Although the existence of typhoid germs has not been proved, it must be regarded as possible. Klein, a few years ago, announced the discovery of the specific organism of typhoid in the affected intestinal glands, but Creighton, of Cambridge, showed that the supposed germs were produced by the mode of preparation. This *fiasco* threw great discredit on the whole question of germs. Nevertheless, the course of treatment directed against supposed germs — the antiseptic method — has had a most favorable influence on the progress and mortality from typhoid. Whilst the specific plan has been advocated in Germany, the Montpellier school have brought forward carbolic acid as the remedy, and the success which has attended the use of this remedy has been really remarkable. Quite a different complexion has been put on the statistics of mortality since they began the use of carbolic acid. It is probable that the combination of carbolic acid and iodine gives better results than the use of either singly. According to my observation, this method of treatment diminishes the diarrhœa, lowers the fever, and renders the disease much less violent, consequently lessening the mortality. Dr. Wilson has, therefore, rendered us a real service by drawing attention anew to this plan of medication, and especially by supporting his position with valuable cases and statistics. Besides this use of medicines, Dr. Wilson's treatment contains many valuable suggestions and practical methods, which, no doubt, contribute materially to his success.

DR. J. M. DACOSTA spoke of the purgative treatment in enteric fever as that which had been tried in the French hospitals and for a time sanctioned by Louis. As regards calomel it was partly by its purgative action that it was supposed to be beneficial. In his hands the calomel treatment had not yielded favorable results. He had found carbolic acid useful in controlling diarrhœa and in lowering the temperature. He had also employed thymol in one half to one grain doses. He suggested the use of this remedy in the place of carbolic acid as more acceptable to the stomach.

DR. WILSON, in reply to the question of Dr. Hamilton, said that he considered it necessary to frequently change the position of the patient to prevent pulmonary hypostasis. He had intended to emphasize this point in his paper. He called attention to the fact that carbolic acid and like drugs probably exert a favorable influence upon the course of enteric fever by their power to stay the rapid decomposition of the intestinal contents, which, for lack of the antiseptic influence of the intestinal juices, the bile, etc., all of which are changed, is a secondary cause of irritation, diarrhœa, and tympany. Calomel also, he thought, probably exerted an indirect beneficial influence in the same direction.

— It is said that in Wisconsin any druggist, apothecary, or vender of medicine is liable to a fine of ten dollars and costs for every time he is convicted of refilling a prescription marked "No Duplicate."

A CASE OF ABSCESS DISCHARGING AT THE UMBILICUS IN AN INFANT.

BY C. W. STICKNEY, M. D., HOLDEN, MASS.

THE cases described by Dr. Nichols in the JOURNAL of October 26, 1882, of abscess discharging at the navel in puerperal women reminds me of a somewhat similar case occurring in a female child six months old, and which may be of interest in connection with those cited. When first called to the case, in April last, I found the child suffering evidently from gastro-intestinal derangement, manifested by vomiting of everything taken into the stomach, slight febrile disturbance, thirst, sleeplessness, and constipation. There was some tympanites, but at first no tenderness of the abdomen. The tongue was covered for the most part with a thick, soft, white fur. The child had been troubled more or less with constipation from birth, otherwise had been healthy. Suspecting intestinal obstruction, I administered castor oil, which, however, affected the bowels naturally, thus relieving anxiety in this direction. After two or three days I found on palpation a circular area of induration about three inches in diameter, having the umbilicus as its centre. The umbilicus seemed to rest in a cup-shaped depression in the surface of the tumor; the swelling and induration were accurately defined by an abrupt though somewhat rounded circumference. Very light percussion revealed dullness over the affected region; deep percussion was tympanitic like the rest of the abdomen. Hop-bags and cloths wrung out of hot water were applied to relieve discomfort. Soon, however, the umbilicus began to push forward as a rounded red tumor which soon showed distinct fluctuation. Suppuration being now certain, light poultices were applied, and on the sixth day the umbilical tumor ruptured and discharged a small quantity of healthy pus. Some relief of symptoms followed, but the circular tumor remained in the same condition. Poultices were continued in the hope of keeping up the discharge, so that eventually the abscess might thoroughly evacuate itself through the external opening, thus lessening the risk of rupture into the peritoneal cavity. Matters now progressed well; there was a constant, free discharge of pus, and the indurated mass was perceptibly softening. But on the morning of the ninth day, while straining to evacuate the bowels, the patient passed suddenly into a state of collapse, and never rallied. An autopsy was not permitted.

When asked for a diagnosis, I gave: Either abscess of the abdominal wall external to the peritonæum or localized suppurative peritonitis circumscribed by adhesions, death in either case being caused by rupture into the peritoneal cavity.

— A very serious epidemic of measles has visited Iceland during the past summer, of special interest because the island, owing to its isolated position, had for thirty-five years enjoyed immunity from the disease, so that few of the inhabitants had ever had it. The disease was introduced May 2, and by the end of June 1100 out of the 2700 inhabitants of Reykjavik were ill, and six to eight deaths occurred daily. The total number of deaths in that town was one hundred and fifty. The commonest causes of death were the complications, capillary bronchitis and catarrhal pneumonia.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

C. M. JONES, SECRETARY.

NOVEMBER 20, 1882. DR. MORRILL presided.

DR. J. F. BUSH read the regular paper on

CASES OF INTESTINAL OBSTRUCTION TREATED BY MEANS OF THE RECTAL TUBE.[1]

DR. BLAKE remarked that perhaps no subject coming under the physician's care presented so many perplexing conditions as intestinal obstruction. Those of the large intestine belonged to the more easily recognized variety, in which treatment was oftener followed by successful results. In obstruction of the small intestine the symptoms are more obscure, diagnosis difficult, and treatment unsatisfactory. In the cases of the latter variety coming under my care the most distressing symptom after the first few days was flatulent distention. This, however, can now be relieved as often as necessary by the use of the smallest-sized needle of an aspirator, pumping out the gas until the distention is completely relieved. Life can be prolonged for weeks and months in many cases by this procedure, and time gained for other treatment. I have but little faith in the efficacy of medical treatment, however, in obstructions of the small intestine. Formerly, and, indeed, until quite recently, there seems to have been a morbid dread of the peritonæum, and nothing was done surgically to attempt to relieve these cases after medical treatment fails. Now, however, when one of our own surgeons, Dr. John Homans, shows eighty-nine per cent. of recoveries in ovariotomy, and without selecting cases favorable for operation, a record which is an honor to American surgery, and to which we can justly point with pride, it would be a grave omission of duty on the part of the medical attendant to omit recommending and strongly urging that at least an exploratory operation should be done. We all know that peritoneal bands, twists, and adhesions do not soften, break down, or come to any favorable change, and we can readily see how little benefit can be hoped in such cases for successful treatment with causes like the above in existence. A good deal is said about the difficulty of finding the seat of the obstruction, but when we remember that the intestine is always distended *above* and always empty *below* the site of the obstruction, this difficulty, in skillful hands, cannot be very great. Certain it is that success not infrequently attends such operations, as the reported recoveries in the journals show, and even the standard works on surgery are beginning to urge early operations. We should remember that the *time* chosen should be as soon after a fair trial of medical treatment has failed as possible. We all realize the importance of early operation in other cases, and the same reasons exist to perhaps a greater degree in this grave lesion.

The rectal bougie in its present exceedingly flexible condition is a valuable aid in allowing us to distend the large intestine with fluid. I have seldom been able to introduce more than two quarts. In relation to pumping air into the rectum, I am inclined to believe that although it may prove of benefit occasionally it should be done very carefully. Forcible distention of an intestine which may have been the seat of old ulcerations or otherwise weakened by disease cannot be free from danger.

I should, perhaps, have alluded to a class of obstructions of a spasmodic character, but there are so many varieties that it would take too much time to particularize.

DR. GERRY said: My feeling in regard to surgical interference in cases of intestinal obstruction is that this is the last resort after a physician finds that he has one of the more dangerous forms, and after other well-known remedies have been used in vain. Mr. Allingham, of London, although an expert in operations of this nature, is extremely cautious before inflicting an artificial anus upon a patient, and he related to me a case in which it seemed imperative for him to operate, but he hesitated and bethought himself of electricity, which proved successful, although the case seemed an extreme one, before the contents of the fæcal tumor started to come away, the diagnosis pointing to a loop or band. I am personally very much in favor of aspirating the intestines, as described by Dr. Blake, where that distressing and dangerous symptom, *distention*, is present. In cases of obstruction very active cathartics should be used with great care, a view which Dr. Bowditch impressed on my mind some years ago. Injections properly administered are a safe remedy, and usually give relief. As regards operation, it seems to me that with our knowledge of abdominal surgery we can be reasonably sure of a good per cent. of success. The operation does not appear even to friends so dangerous as formerly. But if undertaken at all it should be performed early in the history of the case, before serious inflammatory conditions can arise.

DR. WEBBER said: I have no experience in obstruction high up in the intestine, but in cases of fæcal accumulation in the colon, where injections of soapsuds have been of little value, an injection of half or three fourths of a pint of sweet oil, followed some hours later by a watery injection, has been successful. Obstipation is often caused by the undue absorption of the intestinal fluids, making the fæces dry and hard. While at the outset an injection of water is quickly absorbed, one of oil remains to soften the fæcal masses, and thus renders the subsequent watery injection effectual in starting downwards the contents of the bowel. The absorbents of the colon above the rectum are not so numerous as in the rectum itself. Hence, if by the aid of the tube the fluids are carried higher up the bowel they will be absorbed to a less extent than if merely introduced into the rectum, and thereby become more effective.

DR. BUCKINGHAM said he had had the same results as Dr. Webber, obstinate constipation, not obstruction, yielding readily to an injection of oil after repeated injections of salt and water had completely failed.

Dr. Buckingham inquired further what proportion of cases are relieved by continued narcotism without other treatment. He had seen a case in which a large injection had not broken down the obstruction, but in which, after the patient was made comfortable with opium, the obstruction had gradually moved along the colon, old fæces being discharged, and tenderness remaining at the original site.

DR. BUSH said his patients had been kept comfortable with opium. The pain was relieved, and if the trouble in any case depended on pain or spasms he

[1] See page 97 of this number of the JOURNAL.

would expect continued narcotism to afford relief without resort to other measures.

DR. F. C. SHATTUCK said that Dr. Buckingham's question reminded him of a colored man who came to the hospital a few years ago complaining of frequent attacks of colicky pain attended by constipation and flatulence. When the bowels were free he was pretty comfortable and could do his work. After a course of iodide of potassium the urine was examined for lead with a negative result. He was then treated by laxatives, and under careful management his attacks were for a time somewhat mitigated in severity and frequency. Still the attacks recurred from time to time, and Dr. Shattuck saw him in several of them outside of the hospital. The attacks were now clearly due to obstruction of the bowels, and the relief afforded by the subcutaneous injection of morphia was most striking. Freedom from pain was followed after a longer or shorter interval by copious discharges from the bowel, followed by convalescence and another period of comparative health. The man came later under the care of a homœopathic physician, who, after a fatal attack of obstruction, secured an autopsy, and was kind enough to show Dr. Shattuck the specimen, — a stricture of the intestine. Death occurred nearly two years after his first appearance at the hospital.

DR. FITZ remarked that the recent investigations of Nothnagel threw light on the favorable influence of morphine in certain cases of intestinal obstruction with stercoraceous vomiting. This observer found that small doses of morphia checked the ascending contractions of the intestine induced by the application of soda, and it was not unlikely that a similar effect might result where a temporary internal cause of intestinal obstruction was the occasion of ascending contractions. With the cessation of the latter the possibility of an evacuation of the retained intestinal contents was favored.

With regard to Dr. Blake's advocacy of operative interference in cases of intestinal obstruction, attention was called to certain serious objections. Although the recent advances in abdominal surgery were unquestionably such as greatly diminished the risk of an incision through its walls, under ordinary circumstances the condition of the abdominal cavity in intestinal obstruction was extraordinary.

The difficulties of diagnosis during life are such that time is often an important element in an eliminative diagnosis. With the occurrence of the more severe forms of obstruction such serious complications are likely to occur in this time that the operation is rendered inefficient. In this connection reference is made to the rapid occurrence of gangrenous inflammation of the intestine in cases of intussusception or of strangulation of the intestine, however occasioned.

With the frequent impossibility of a correct diagnosis previous to the operation there is often great difficulty in ascertaining the cause of the obstruction after the abdominal cavity is opened. With all the opportunities offered at a post-mortem examination it is usually a matter of difficult and protracted manipulation and dissection to discover the cause of obstruction. This is largely due to the enormous distention of the intestines above the place of obstruction, the abdominal cavity being crowded with bulging and elastic coils of intestine tied down by the mesentery. The examination of the deeper parts is thus obscured, and the relation of the intestine to its surroundings is confused.

DR. BOLLES spoke of the difficulty of finding intestinal obstructions at a post mortem. Generally they are such that it would have been impossible to have discovered them by any ante-mortem operation. In one case which he had examined, after finding a fibrous band, a careful dissection was requisite in order to release the bowel, and in a second case where there was a twist of the small intestine it had to be picked out with the uttermost care before passage through could be secured. In either case operative interference would have been a failure for the difficulties involved. Surgeons are deterred from operating, not by dread of opening the abdomen, but by the obscurity of diagnosis.

THE NEW PHARMACOPŒIA.

DR. B. F. DAVENPORT brought up the subject of the new Pharmacopœia, and spoke as follows: —

I wish to call the attention of the Society to the appearance of the new revision of a work which I fear that we as physicians are not nearly as interested in as we ought to be. The new United States Pharmacopœia has now, after the continuous labors of the committee in its revision, ever since the meeting of the convention at Washington, D. C., in May, 1880, at last been published. It is now a far more important work than it has ever been before, both on account of its own scientific merits and because it has now been made by State statute the legal standard to which all official medicines are required to conform in regard to their strength, quality, or purity.

Among the more important changes that have been made in this upon the last revision are the following: —

The substitution in the formulas of parts by weight for specific weights and measures, in most cases without making a material change in the strength of the preparations, in the fluid extracts, however, the exception being made of having the finished product made up to a certain metric measure instead of weight, whereby they are decreased about five per cent. in their strength. The vinegar, wine, and tincture of opium are now all of a uniform ten per cent. opium strength. The first two being thus considerably decreased while the last is increased about ten per cent. in its strength.

Two hundred and fifty-six new titles have been added to the list, which, after the reduction made by the 229 omissions, left still 997 titles in the official list.

As we have now the best Pharmacopœia of any nation, we physicians have no excuse for the prescribing of proprietary medical preparations. As Prof. C. A. Lindsley, of Yale College, so justly argues in his able essay read before the Connecticut Medical Society, at its last annual meeting, the use of ready-made formulæ is demoralizing to the profession, because they are sure to lower the standard of professional intelligence, to diminish the accurate knowledge of materia medica and the capacity of making wise therapeutic adaptations of remedies.

What encouragement is there to pharmacists to become skillful and expert if the physicians make no demand upon them, but oblige them to send to a distance for preparations which they could make as well or better themselves. Any apprentice could pass over the counter and take the pay for ready-made preparations. The pharmacist thus defrauded of the exercise of his proper functions, the option of either making or of selection, according to his own best judg-

ment from the market, of all the pharmaceutical preparations which he is called upon to dispense, is degraded to the vocation of a mere shopkeeper, and is compelled to pay to the manufacturing pharmacist the profits which are justly his own. Then, too, he cannot be so justly held answerable for the quality of other men's preparations which are not of his own selection as he could if he was given his choice of himself preparing or of taking the preparations of others whom he felt willing to guarantee. In regard to the very serious evil to him of having to keep a full line of all the different makes of coated pills, fluid extracts, and elixirs, just ask your nearest apothecary and get a most feeling expression thereof, if you are in any doubt. Further than this indirect injury to ourselves done through the pharmacist there is the direct evil of providing at all the drug stores the very medicines we are ourselves accustomed to prescribe already done up in convenient packages, with wrappers with full printed instructions as to the diseases they will cure, and with all the requisite directions as to dose and administration. The druggist is of course just as familiar with them as is the physician, for both get all their information from the same source, that is, from the wrappers themselves. Why should the patient go to his physician when the druggist can show to him his own physician's published certificate upon the wrapper of his bottle that its contents is the best cure for the disease from which he now suffers?

GYNÆCOLOGICAL SOCIETY OF BOSTON.

HENRY M. FIELD, M. D., SECRETARY.

Stated Meeting, first Thursday in April, 1882.

President Wheeler in the chair.

THE OBLITERATION OF THE UTERINE CAVITY IN PREGNANCY.

Dr. H. R. Storer remarked he had been struck, during the reading of the records of the last meeting, with Dr. Norris's position in respect of the obliteration of the uterine cavity in pregnancy, procured by the turgescence of the glands, — a condition, it was commonly assumed, which might not be complete under three months. Would ask how complete placenta prævia can be explained consistently with this statement; would also remark the frequency with which, as it is claimed, the uterine sound can be passed up and swept about in the early months of pregnancy without occasioning abortion.

Dr. Marcy suggested discussion of these points should be delayed until his paper was read, as closely cognate matters were therein discussed.

Call was hereupon made for Dr. Marcy's paper, —

SOME FORMS OF DISEASE OF THE PLACENTA.

The reader remarked in a prefatory way that his subject was of necessity complex and concisely presented, but he had done the best he could to make himself clear. The paper was frequently illustrated by various diagrams.

He began by giving a careful review of the histogenesis of the placenta, showing the great value of comparative anatomy, and the light shed upon this important subject by its teachings, especially as developed by the studies of Owen, Huxley, Turner, and Ercolani. All the vertebrates, during the period of embryonic life, in order to complete the marvelous phases of their development, require special nourishment, which is always furnished them by the mother. This is conveyed to and converted into its own substance by the embryo, and however many and considerable may be the differences in these two fundamental factors, the unity running through them readily appears under two different forms, represented by the yolk of the egg in the oviparous animals, and by the placenta in vertebrate mammals. In the first the maternal aliment is stored up in a mass by the mother, surrounding the ovum in such quantity as is needed by the embryo to complete its development; in the second this nutrition is furnished by the mother through the placenta, which elaborates it as is needful for the developing embryo. These materials in every case are absorbed and conveyed to the fœtus by means of its own vascular appendages. This nutrition is carried on during the developing period in all vertebrates through a single law of physiological modality. The typical anatomical form in the two fundamental parts of the placenta, however wide the variation, is always identical: a villus of new formation both in the maternal and fœtal part, composed of an internal vascular loop, surrounded by protoplasmic cells, and covered by an outer epithelium. The office of the villi only is different, the fœtal being *absorptive*, the maternal villi *secretive*.

These villi always come in contact more or less intimately, but the walls of the vascular loops never in any instance touch. This is the more to be emphasized since it invalidates the idea hitherto held, and still almost universally taught, of the mode of the nutrition of the fœtus: interchange between the two bloods by endosmosis and exosmosis.

The different ways of interblending between the fœtal and maternal villi give the complex and confusing picture of placental formation. In the development of the single placenta the epithelial covering of the vascular loop of the fœtal villus is wanting, because of the intimate relation which has been established between it and the secretory villus, which *never* loses its own epithelial covering. The form of the vascular loop of the maternal villus is very greatly varied, and in the quadrumana and the human species the dilatations become lacunose and are actually enormous.

During the early period of pregnancy in woman the decidual cells form a complete layer, richly vascular, into which the villi of the chorion penetrate and ramify. For a time the relationship between these two parts is not so close that they cannot be separated. In this stage, before the maternal vessels become ectasic, we have a form of development not unlike that of the diffused or disseminated placenta. The belief that the lacunæ were really large cavities, as they had the microscopic appearance of being, and not the maternal vessels greatly dilated, was held as a truth, proved and indisputable. It was through this belief that two other deceptive appearances were received as truth; that the villi floated in the maternal blood, and that the epithelium covering them appertained to the fœtus instead of the mother. It has seemed thus necessary to review the anatomical and physiological modality of placental formation in order *now*, and not earlier, to investigate some of the more common forms of placental disease.

The paper being before the Society for discussion, Dr. Clarke inquired if Ercolani's system had been still further illustrated by observations from disease.

DR. MARCY replied that it had. He would further remark that, only a few days after the separation of the fœtus, careful searching would enable us to find the line of demarkation between the maternal and fœtal villi.

DR. FIELD observed he had special reason to be interested in the question asked by Dr. Storer before the reading of the paper; he had himself previously detailed to the Society the difficulty he had in procuring abortion under three months. At other times the sound could hardly be once introduced without response. In certain difficult cases, and he could call to mind three such where he had been forced to procure abortion, it seemed as if it were impossible to do sufficient injury with the sound to disturb the relations of the fœtus and the uterus. Dr, Field proceeded in some detail to describe the difficulties he had encountered.

DR. NORRIS asked if air had been introduced. He had been called in the night to a case of abortion where the forcing in of air appeared to be the determining cause; this at the hands of an irregular practitioner. Separation of membranes and abortion speedily followed.

DR. FIELD was well aware of the efficiency of this method, but was afraid of it. Believed it had been known to cause almost instantaneous death.

DR. WHEELER recalled a fatal case, which had come to his knowledge, where air had been forced into the uterus through the imperfect working of a Davidson syringe which had been charged with water.

DR. MARTIN had knowledge of a number of cases where abortion had been, purposely and with but little difficulty, induced by a skilled use of Simpson's sound. Had known abortion to follow within twenty-four hours after recourse to this instrument. Ergot was of little help or use unless abortion or parturition had been already inaugurated by other means.

DR. MARCY showed a specimen from a recent abortion. The ovum will bear considerable disturbance so long as the placental site is not interfered with; but rupture of the membranes will ordinarily lead to a speedy casting off of the fœtus.

DR. WEEKS raised the question as to the *modus operandi* of air driven into the uterus in effecting abortion; had seen two cases lately, both the work of irregulars. In one, the air was introduced through a catheter, in the other the ordinary bulb syringe was used, the rectal tube having been inserted within the uterine os. In both instances abortion followed within forty-eight to sixty hours, with but little pain or hæmorrhage or disturbance of any kind, and apparently without danger to the patient.

DR. WHEELER remembered a case in which he had largely relied upon a flexible catheter, introduced and left *in utero*.

DR. MARTIN believed a frequent cause of abortion, if not, indeed, the prevailing condition, to be a partial separation at the edge of the placental site, which, with the consequent and subsequent hæmorrhage, acts as a source of still further excitation. The resulting clot serves the purpose of a wedge; and if this state of things be permitted to continue and extend, abortion must ensue.

DR. STORER believed in the correctness of Dr. Martin's position, but superadded, and of necessity present, is a degree of nervous irritability. If this can be controlled, abortion may be at times prevented, although the mischief described by Dr. Martin has been already accomplished. Dr. Chapman's suggestion of heat applied to the sacral region is of especial value under these circumstances: on the other hand, cold so applied will encourage the abortion. An abortion which has been threatened and escaped will leave a permanent impression of injury upon the placenta, as an investigation at time of birth, months after, will prove. Dr. Storer hoped Dr. Marcy would continue his researches, and especially that he would instruct the Society upon the pathology and other phenomena of membranous dysmenorrhœa.

DR. WEEKS' question as to the mechanism of abortion, obtained by the introduction of air into the uterus, was again raised.

DR. MARTIN believed that whatever tends to increase or diminish the size of the cavity of the womb tends to produce muscular contraction, which, if the organ be gravid, may result in the expulsion of its contents. He called attention to the large number and variety of electrical instruments which were being exposed for sale, to be applied by the subject and worn in various ways for the purpose of procuring miscarriage.

DR. WHEELER reprehended resort to sponge-tent in the effort to cause abortion. In one instance, where abortion had already taken place, the woman died of septicæmia, for which the sponge-tent was believed to be responsible. This stricture was meant to apply to the puerperal state only; in the non-puerperal other conditions obtained, and the danger was less.

DR. M. L. THORN recalled the fact that Dixi Crosby was accustomed to propose for the procurement of abortion a saturated solution of alum introduced between the membranes and uterus and without rupturing membranes. The speaker asked the mode of action of this expedient.

DR. STORER suggested that such a solution left in the uterus must cause extreme exosmosis, and so, as Dr. W. S. Brown rejoined, empty the uterus through the contractions its distention would be likely to bring about.

DR. MARCY asked for experiences in mole pregnancy and hydatids.

DR. MARTIN responded with a recent experience in which patient had a fall and expected to abort early in pregnancy, but escaped. As gestation proceeded she became immensely anasarcous, the labia being so distended as to be almost diaphanous. Finally he was called in haste to find the woman floating in a pool of fluid which had run through the bed and upon the floor; she had given birth to a great mass of hydatids. The blood she discharged looked like currant juice, so impoverished was it. Gave ergot, used ice, resorted to compression. Then examined and brought away a pitcher, and perhaps a pail, full of hydatids. Placenta gave evidence of hardly more than four or five months' development: on further examination it proved to be separated at one point, and here, as a place of origin, had sprung the hydatids, — a growth still hanging from its attachment like a bunch of grapes. Fœtus when brought away showed that its growth had been arrested at, apparently, five months. An interesting fact remains for mention: the placenta was perfectly healthy, and fœtus not in the least putrid. The latter had probably continued to live, in a state of arrested development, until a short time before birth.

DR. CLARKE cited a case in which he attended a woman at full term and the whole placenta came away.

She got on very well for three days, when she was suddenly seized with violent pain and a placental-looking mass was extruded from the vagina. Dr. Holt, of Cambridge, examined it and pronounced it to be placenta. The woman said she had been conscious, for two years past, of a swelling at one side of the womb; but now it was gone. Specimen had no odor, and was not decomposed.

DR. STORER suggested, in explanation, twin pregnancy, with early blighting of a twin, which had afterwards been destroyed.

DR. MARCY regarded Dr. Martin's case one of great importance. It would seem as if a single cotyledon had developed in this extraordinary manner. Mole pregnancy is commonly limited to a development which takes place prior to the formation of the placenta, before the circumferential villi of the chorion at other points have atrophied. This is more frequently observed than the abnormity due to placental modification.

DR. STORER believed that the passage of what was intrinsically nothing more than coagula often gave rise to a belief in the extrusion of a mole. Again, in the unmarried, whatever may be the character of the product of conception, the question being raised if it is not a false conception, and nature having apparently made some effort to spare the woman, the doctor respects the feelings of the patient and patient's friends, and leaves them in their ignorance. Then there is a residuum of cases when the doctor makes a mistake. He had met upon the train not long since a gentleman whose wife, as was supposed, had long been the subject of uterine disease; frequently on the occasion of menstruation she would pass, with great pain, what appeared to be the exuviæ of membranous dysmenorrhœa. Another physician called in, who proved to be more sharp sighted, closely investigated the case, and found in the supposed product of menstrual decidua an impregnated ovum. The woman was one of those exceptional subjects who are constantly conceiving upon the slightest exposure, and the uterus had formed the habit of speedily casting off the embryo.

DR. M. L. THORN quoted the opinion of Dr. Tait, who declares that true membranous dysmenorrhœa always implies conception.

This both DR. STORER and DR. MARTIN doubted; honest women and unmarried have dysmenorrhœa every month, and pass their period in great agony.

DR. MARTIN had often been surprised to find to what extent an organized clot may simulate the placenta. Doctors often err in this direction. Old women and nurses make this mistake, with disastrous consequences, it may be, for the patient. The doctor recalled a case in which a woman was said to have miscarried ten weeks before. She was suddenly seized with renewed hæmorrhage, and a mass fell from her as large as a cocoa-nut; it was nothing less than the placenta, which had been all this time retained.

DR. MARCY remarked, in respect of the *false membrane*, that its histological character is very simple; and this he briefly described. All over its interior can be seen the casts of the utricular glands. It takes its origin in a hyperplastic condition of the epithelium lining the interior of the uterus.

DR. MARTIN detailed the history of a remarkable case of general or constitutional vaccinia in an infant, which contracted the disease from a secondary vaccination done upon the mother, from whose breasts it drew its support.

DR. STORER informed the Society that its Fellow, Dr. Campbell, of East Boston, who held a position in the present Legislature, had already shown his loyalty to those interests with the culture of which the Society was intrusted, by bringing forward a bill for the relief of shop-girls.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, JANUARY 22, 1883.

THE NEW YORK CODE OF ETHICS.

DR. LEWIS A. SAYRE presented a resolution to the effect that the delegates of the County Medical Society to the approaching meeting of the State Society at Albany should be instructed to vote in favor of the repeal of the Code of Ethics adopted at the meeting last year, and that they should be requested to use their best efforts to secure the passage of the same. On this resolution Dr. Sayre called for the ayes and nays, so that the position in regard to the matter of all present might be permanently recorded. There were at the meeting, unfortunately, a number of those officious members who were most active in carrying out the measure which disgraced the New York State Society in February last, and which has since been so universally and severely criticised both in this country and in Europe, and who, with their usual effrontery, had evidently turned out in force for the express purpose of choking off discussion on the subject. Through their efforts Dr. Sayre's motion was laid on the table. Dr. T. Gaillard Thomas, who was prevented from being present by being suddenly called out of town on professional business, wrote to say that he regretted this absence very much, as he should have liked to speak in favor of the resolution. "I believe," he continued, "that I represent the feeling of the majority of our best conservative men in saying that I consider the breaking down of the barriers, as was done last year, as disastrous in its effects, and very much to be regretted."

THE NATIONAL BOARD OF HEALTH.

A resolution by Dr. John C. Peters, to the effect that the Society should petition Congress to restore to the National Board of Health the powers of which it had been deprived, having been referred to the Comitia Minora (the executive committee of the Society), the Comitia, through the secretary, asked for more information on the subject before taking final action in regard to it. This information was given to some extent by Dr. Abraham Jacobi, who, at the request of Dr. Peters, offered a series of resolutions, declaring that by the reduction of the appropriation for the maintenance and work of the National Board of Health by Congress, last year, the usefulness of that body had been seriously impaired; that the profession looked with no little pleasure upon the labors and successes already achieved by the Board; that its work had compared favorably with the national health boards in Europe; that the investigations conducted by it, especially on the subjects of diphtheria, yellow fever, and disinfectants, had been of permanent scientific value; that most of these labors and researches had now been stopped, which was the more to be regretted because in most of the large cities the appropriations for local boards of health had been increased on account of the

increasing importance of their work; that it was felt that no money could be spent with greater advantage to the nation than that which was devoted to the maintenance of the public health, and that therefore the Medical Society of the County respectfully urged upon Congress the importance of increasing the funds appropriated to the National Board of Health to at least the former amount. In presenting these resolutions Dr. Jacobi said that personally he had missed very seriously the bulletins of the Board, and the supplements to these, which he regarded as one of the most important features of its work. On motion of Dr. Sturgis the matter was again referred to the Comitia Minora with power.

THE DIFFERENTIAL INDICATIONS FOR THE USE OF DYNAMIC AND FRANKLINIC OR STATIC ELECTRICITY.

DR. A. D. ROCKWELL then read a paper on the above subject. In commencing he said that since a distinguished college professor had recently announced in one of his lectures that a simple faradic apparatus was all that was ever practically required in medical electricity, he thought it was still in order to offer contributions on this subject. It was not to be supposed that any one form of electricity was applicable in all affections or in all stages of the same disease in which the use of this agent was called for. For instance, in hemiplegia with small impairment of electro-muscular contractility, if electricity were employed at all, faradization, and with a very mild current, would be the only form applicable, while in paraplegia accompanied with very marked diminution of electro-muscular contractility the galvanic current was unquestionably called for, and the galvanic current alone. The difference in the character of the two currents was well shown in facial paralysis due to cold, and doubtless of rheumatic origin, in which the muscles did not respond at all to faradization, but acted promptly under the influence of galvanism. Again, there were well-founded physical and physiological reasons why in certain pathological conditions the constant current should be employed in the special manner known as central galvanization. In the majority of diseases in which electricity was called for at all, however, it might be stated that the application of each one of the three forms now in use was appropriate at different periods. In neuralgia the galvanic current was, as a rule, of the most utility, but at the same time there were certain forms of pain in which faradization was not only invaluable but the only mode of applying electricity which was of any service whatever in relieving the suffering. The law could now be laid down, he thought, that in the great majority of cases of neuralgia in which firm pressure over the nerves affected elicited tenderness galvanism was called for, while in those cases in which pressure produced no effect the faradic current was the appropriate form. The measure of benefit to be derived from one or the other depended, therefore, on the special features of each individual case.

In the class of cases in which there was general debility of the system faradization was undoubtedly indicated on account of its special constitutional tonic effects. That electricity was not merely a stimulant, but also a tonic agent, had been pointed out by the writer a number of years ago. The enunciation of this view had attracted a good deal of attention both at home and abroad at the time, but while it had been acted upon practically to a considerable extent in Germany, the matter was still almost entirely ignored in this country. Asthenopia, in which the muscles of accommodation were affected, demanded the use of the faradic current alone. This was also true of the paralysis following diphtheria, in which galvanism had but little effect. Dr. Rockwell said that he had had an exceptionally large experience in the latter class of cases, in many of which the affection was so obstinate that nature had been unable to effect a cure, and he related one or two instances by way of illustration. One was the case of a lady, twenty-five years of age, living in New Jersey, whom he was called to see in consultation. All four of her extremities had been paralyzed for three months, and there was in addition ptosis of the left eye and double vision, so that it was altogether one of the most severe cases that he had ever met with. Under the use of faradization she was able to leave her bed in three weeks.

Among the affections in which galvanism was especially called for, on the other hand, was spinal irritation or neuralgia. It was also particularly indicated in certain sequelæ of cerebro-spinal meningitis, such as excruciating pains in the eyes, head, and back of neck, and stiffening of the muscles, either with or without convulsive seizures. In exophthalmic goitre he was able to report some cases improved, and some cases actually cured, by the use of galvanism, which was also called for in cases of the loss of sense of taste or smell. In diseases of the skin galvanism was of the most service, and it was of the most remarkable efficacy in herpes zoster. In electro-surgery galvanism was, of course, used exclusively. In extra-uterine pregnancy it was perhaps not generally known how very efficient galvanism was in causing the speedy death of the fœtus. In chorea the character of the affection and the condition of the patient would determine which form of dynamic electricity was to be selected. If the general health were good, central galvanization would be of the most service; but if there were anæmia and debility present, general faradization was called for instead. In amenorrhœa and dysmenorrhœa also the form of electricity to be employed would depend upon the special features of each individual case.

Franklinism, applied by means of insulation, sparks, or the use of a roller, was called for as an adjunct or supplement to dynamic electricity, and was an invaluable agent in its appropriate place. All physicians were familiar with cases in which a remedy which acted well at first seemed after a time to lose its effect. The same was found to be true of galvanism and faradism in certain cases, and in some of these very excellent results were secured by resorting to franklinism.

In the treatment of neuralgia, franklinism, as a rule, was not comparable to dynamic electricity; but in certain chronic cases of synovitis and contractured muscles it proved a very effective agent. In electro-diagnosis, again, it was of but small value as compared with the other forms. It could be seen, therefore, that franklinism was of much more limited application than dynamic electricity. The beginner in electro-therapeutics should by all means commence with the study of the latter, and not till after he had thoroughly mastered the subject need he take up that of franklinism.

DR. A. JACOBI thought the paper a very complete one, to which little could be added, and that the conclusions of the author were correct. He quite agreed

with Dr. Rockwell in his opinions in regard to the application of electricity in paralysis following diphtheria, a subject in which he had had a very considerable personal experience. There were certain cases of this character which were very dangerous, and which would prove rapidly fatal unless they were treated with great promptness and with great success, namely, those in which paralysis of the respiratory muscles occurred. All the cases of diphtheritic paralysis which he had seen prove fatal were of this kind, with the exception of a few in which the muscles of deglutition having become paralyzed, food got into the lungs and set up pneumonia. Sometimes the paralysis of the respiratory muscles came on very suddenly in the course of ordinary diphtheritic paralysis, and unless relief were very promptly afforded, the patient would die of apnœa. There was then no time to employ medicines by the mouth, and strychnia, if it were administered at all, was to be given by hypodermic injection.

Dr. Lewis A. Sayre remarked that his experience in the use of electricity during the past fifteen or twenty years was entirely in accord with the results stated by Dr. Rockwell in his paper.

Dr. John P. Garrish thought that the mistake was often made in practice of employing electricity at too early a period. While it was of great efficacy, no doubt, in many chronic affections, he did not believe that it was of any value whatever in acute disease.

Dr. Jacobi said he would enunciate a general rule for guidance in selecting the form of dynamic electricity to be used in any given case, which he believed to be a sound one, but in regard to which he would like to have an expression of Dr. Rockwell's opinion. It was this: In all affections of the vaso-motor system and of the trophic nerves galvanism was to be employed mainly and perhaps exclusively. So far as he could recall the various conditions mentioned in the paper, he thought the treatment recommended was in accordance with this rule.

In reply, Dr. Rockwell stated that he believed that as a general law it held good, although there were some exceptions to be noted. For instance, facial paralysis of rheumatic origin and excited by cold, in which galvanism was called for, could hardly be placed in the class of affections mentioned. In this trouble faradization produced no contractions whatever. At first a very weak galvanic current was to be employed, and as the patient improved the strength of the current was gradually to be increased. Finally, the faradic current might be used.

Dr. Jacobi thought that this was perhaps not an exception to the rule after all. He had been under the impression that the faradic current was the proper one to use in this affection, but since galvanism was the more efficient agent, might it not be true that the paralysis was in reality due to a disturbance of the vaso-motor system? When the nerve-substance itself was affected, galvanism was of no benefit, and it seemed to him, therefore, that this was probably a disorder of the circulation, although there might be a rheumatic element in the case as well.

Dr. Mittendorf said that he had used faradism in cases of paralysis of accommodation with good effect, as well as for the relief of the pain which ensued after the use of the internal recti muscles when weak. In amblyopia due to alcoholism, tobacco, or loss of blood, he had employed galvanism with success.

The President, Dr. David Webster, had had very little experience in the treatment of amblyopia by electricity, and what he had had was not very favorable. In paralysis of the ocular muscles he had had good results from the use of faradization, though he believed its employment in this condition was contrary to the teachings of the books. His results with electricity in the treatment of amblyopia, asthenopia, and atrophy of the optic nerve had been so unsatisfactory, however, that he had about abandoned its use in these affections.

Dr. Chamberlain stated that, contrary to the experience of Dr. Rockwell, he had met with good results in the treatment of facial paralysis with the faradic current.

A member having asked Dr. Rockwell what his opinion was of the value of electricity in stricture of the urethra, he replied that he certainly had not met with the success which some others had claimed for it in this affection.

Another member also mentioned that he had employed it in severe cases of stricture, and had been altogether disappointed in its effect.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. Nancrede, Recorder.

Thursday Evening, January 11, 1883. The President, Dr. Tyson, in the chair.

Condylomatous Tumor of the Labium.

Exhibited by Dr. Nancrede for Dr. C. M. Seltzer.

Mrs. —— contracted syphilis nine years ago from her first husband. Has had specific treatment at intervals, but never prolonged beyond a few weeks each time. Condylomata and ulcerations around the vulva, anus, and perineal region were first noticed about three years ago. She first came under my observation and treatment June 1, 1882, at which time symptoms of her disease were very pronounced, such as cachexia, nervousness, nocturnal headache, ulcers on various portions of the body, numerous condylomata, of which the specimen exhibited was the largest, being a cauliflower-like excrescence springing from the left labium majus, having a pedicle about two and one half inches broad. The clitoris was hypertrophied, forming a knob one inch in diameter. There was urinary incontinence, and consequently severe excoriations of the external genitals. Potass. iod. and hydrarg. bichlorid. were given, upon which there was pronounced systemic improvement. Local treatment failed to remove the condylomata, hence on the 13th November two double ligatures were passed through the pedicle of the largest so as to divide it into three parts; they were then tied tightly, and the mass removed, and the stump cauterized with nitric acid. The clitoris was so sensitive even under profound anæsthesia that it was thought best not to remove it. The patient made a good recovery in ten days, including the cure of the urinary incontinence. Her second husband, to whom she has been married about six years, has no evidence of having syphilis. Her only child by her first husband has stricture of the rectum, and obstinate fissure of the anus, improvement of which only began upon the recognition of their specific origin, and the consequent line of treatment.

Dr. Nancrede suggested the reference of this specimen to the Committee on Morbid Growths, since two somewhat similar specimens had been presented by Drs. Formad and Baer which were myxomatous fibromata.

Although not due, as in the present instance, to the irritation of some sore or abrasion by the discharges, etc., in a syphilitic, yet probably their histological structure was identical.

SMALL TUMOR OF THE HEAD OF THE PANCREAS.

Presented by DR. E. T. BRUEN.

The mass herewith exhibited occupies the head of the pancreas, and is about two and one half inches in diameter. When removed from the cadaver it was closely adherent to the common bile duct. The growth is of a colloid nature, but its histological character is as yet unsettled by microscopic examination. There were no secondary deposits in any other viscera, as is the rule in colloid growths. The patient was a male, aged about sixty-five years. For two years prior to date of his death there had been intermittent attacks of jaundice. This had been attributed to catarrh of the biliary duct, which had developed itself during an attack of malaria. The case was under my care for two months. At first the symptoms of chills and fever led to treatment for malaria, but as the jaundice gradually deepened, treatment for the supposed catarrhal state of the bile duct was instituted. The futility of a well directed and usually successful treatment was the special indication of some more substantial cause. Hepatic trouble or biliary calculi were readily excluded in this case, but there was nothing to fasten suspicion on the pancreas. There was constipation with clay-colored stools. There was a febrile movement of a hectic type — the so-called hepatic fever, accompanied by irregular chills. The intestinal indigestion, so valuable a symptom in many cases of pancreatic disease, was not marked.

Indeed, without exception, the negative results of the clinical record are of the most discouraging character. The case is presented because each case of pancreatic disease ought to be recorded, so that many cases viewed collectively may contribute to the clearness of a future distinct picture of pancreatic disease.

DR. FORMAD said that he had now on record the notes of five or six cases of cancer of the pancreas with marked jaundice where he had made the autopsy. It seemed to him that the jaundice was most persistent in primary pancreatic carcinoma from pressure on the bile duct. He was present at the autopsy of this case, and did not think that the tumor was carcinomatous, as there would then probably have been secondary growths in the liver. The growth was probably a cystic colloid.

DR. BRUEN would like to call the attention of the Society to the fact that he had about a month ago presented a specimen of carcinoma of the pancreas, and had then referred at length to some forty cases of jaundice due to primary carcinoma of the head of the pancreas lately reported by another observer. From these records it was demonstrable that jaundice was an invariable symptom of primary hard carcinoma of the head of the pancreas, while it was uncommon when the disease was secondary or affected other parts of the organ.

DIAPHRAGMATIC HERNIA.

Exhibited by DR. JAS. TYSON.

The patient from whom these specimens were removed was a German between twenty-seven and twenty-eight years of age at his death. He first consulted me on June 21, 1880. He had then been ailing since February, 1878, and had been unable to work in that time. At the date referred to he was stretching when his wife suddenly pretended to tickle him. He quickly threw down his arms, and at that moment felt a sensation of "pain on the left side in the neighborhood of the heart." At the same time he felt faint and cold. In five or ten minutes these sensations passed away, but he remained very much frightened. When he first visited me he complained of shortness of breath and beating of his heart, although the latter was better when he was quiet. He could not even walk across the floor without becoming completely out of breath, but he said he was not short of breath when the accident first occurred. He had also a peculiar puffing expiration, which did not occur, however, with every act of expiration, but once in four or five. This was so characteristic that one of my friends to whom I sent him spoke of him as my "puffing German." There was no cough. Physical examination revealed on inspection almost total absence of movement of the chest wall in the upper half, the respiration being almost purely abdominal. The upper percussion border of the heart corresponded with the junction of the third rib with the sternum, and the right border with the middle of the sternum. The apex beat was in its normal position, but was more diffuse than in a strictly normal state. Pulmonary percussion appeared normal except below the left scapula where resonance was less than in the corresponding situation on the right side. Vocal fremitus was, however, impaired over the whole of the left lung. There were no abnormal cardiac murmurs. His pulse was 72 after the examination was over. He was treated at various times with digitalis, bromide of potassium, chloral, tonics, etc., and even a blister was put over his heart, with the view that there was some cardiac or pericardial affection, although the physical signs were wanting. There was no improvement, although at times the dyspnœa, which was the most distressing symptom, seemed sometimes less; but it always interfered with any exercise whatever. He would walk sometimes half a mile with great difficulty. Notwithstanding this he was encouraged to take exercise. His sleep was unsatisfactory, he would dream and wake up in a great fright. He could always lie upon his left side with more comfort than upon his right. He continued under my observation for a year. I saw him in the latter part of August, 1881, when he seemed a little better. After that I heard nothing of him until I learned of his death, which occurred December 15, 1882, from obstruction.

At the autopsy it was ascertained that about twenty inches of the large intestine with its corresponding mesentery and almost the whole omentum had ascended through the œsophageal opening of the diaphragm into the left pleural sac, encroaching upon the space occupied by the left lung until the latter was compressed into the apex of the left pleural sac and was reduced to a cylindroid mass about fifteen centimetres in length and half as many in diameter. There was no hernial sac, the opening being that for the œsophagus. The case would therefore be technically called one of hernia diaphragmatica spuria. The heart was displaced to the right, but was otherwise normal; the liver was slightly fatty, but the other viscera were normal. It is not unlikely at the moment referred to in the history when the patient threw down his arms that a small portion of the omentum or mesentery slipped through the œsophageal opening, and that subsequently and more or less gradually the vacuum tendency of the pleural sac in each act

of respiration caused the remainder of the mass to be drawn in until the entire cavity was occupied. This accounts for the fact that there was no dyspnœa at the beginning, but that it gradually increased as the thoracic space was intruded upon. In vol. lxxxi, 1882, of Virchow's Archives will be found an exhaustive article on Diaphragmatic Hernia, in which two hundred and ninety-one cases are collated. In a somewhat hasty examination of this paper I have been unable to discover a single case so long under observation as this — nearly four years. Many cases were discovered at the autopsy which had been unsuspected, others were congenital, and others were traumatic.

DR. FORMAD related some facts confirmatory of the history given by Dr. Tyson.

DR. BRUEN asked if there had been any hiccough? If so was there any dysphagia with solid food? Finally, did the physical signs suggest pneumothorax?

DR. ROBERTS made some remarks with reference to the diagnosis and to the possibility of laparotomy in similar cases. He also asked whether the symptoms just preceding death were those of strangulation.

DR. DAVIS referred to thirst as a prominent symptom according to Lawrence.

DR. TYSON replied that Dr. Formad had told him that there was decided hiccough. There was no true tympany with the absence of the vocal fremitus. Nothing gave rise to any suspicion of its true nature. Thirst was marked. There was no dysphagia.

ULCER OF THE STOMACH IN THE ANTERIOR WALL; ADHESIONS TO THE ABDOMINAL WALL; HÆMORRHAGES AND PAIN; DEATH FROM MORPHIA HABIT.

Exhibited by J. H. MUSSER, M. D.

I am indebted to Dr. J. Henry Musser, of Lancaster County, for the privilege of presenting this specimen. I abstract from his notes the following history: I. I., aged seventy-one years, mill-wright. Fourteen years before his death he was attended by the doctor for hæmatemesis occurring after three days of nausea. Over a pint of blood was vomited, and considerable was discharged by stool the next day. In ten days he returned to work and enjoyed good health for two years, with the exception of occasional attacks of indigestion. Then a recurrence of nausea followed by a profuse discharge of blood, per anum, occurred. He made a full recovery, but pain after eating was now noticed. Two years subsequently he bled very much from a wound of the foot, was much prostrated thereby. This was succeeded by severe pain after eating with marked epigastric tenderness. The constant use of narcotics alone gave him relief. In November, 1873, he was again under Dr. J. Henry Musser's care, and was treated for gastric ulcer without any avail, save when he exhibited narcotics. He resorted to the use of morphia, and continued its use during the remainder of his life. Change of diet did not influence the pain, and he partook of a laborer's fare. In 1877 a small tumor to the left of and several inches above the umbilicus, hard, tender, and apparently involving the abdominal wall, was discovered. For several years he worked in a country saw mill, using one drachm of morphia a month. Heavy lifting aggravated his pain. August, 1882, the doctor was again called in to find the patient confined to bed, much emaciated, and with complete anorexia. Death took place three weeks later, during which time he had taken no nourishment, but had used morphia freely. The habit had been acquired, as his friends thought he suffered but little pain. The only anatomical alteration noted at the autopsy was the change in the stomach. The organ was enlarged and contracted (hour-glass) towards its fundus. The anterior wall, one third of the distance from the fundus, and at the point of constriction, was adherent to the abdominal parieties to the left of the median line, three inches above the umbilicus. Opposite to the point of adhesion in the mucous membrane there was a small ulcer two lines deep and six in diameter with clean-cut edges, a healthy floor, and surrounded by cicatricial tissue for a radius of one inch. Indoubtedly the ulcer would have healed entirely had not the morphia habit cut off the patient.

Remarks by DR. J. H. MUSSER. It is plausible to theorize that the first hæmorrhage, taken with the profuse hæmorrhage from the foot, was due to the patient having been of a hæmorrhagic diathesis, and that the second gastric hæmorrhage was from the same cause, and was attended by a hæmorrhagic infarct with subsequent development of the ulcer. Especially is this possible as it was only after the second hæmorrhage that pain occurred, and this symptom is never absent, "except in cases which run a rapid course." (DaCosta.)

DR. NANCREDE related the case of a "bleeder" then under his care, a *female* infant only thirteen months old where death was imminent from epistaxis.

DR. DUNN made some remarks on the general subject of hæmophilia and its treatment.

NEW YORK ACADEMY OF MEDICINE.

SECONDARY PUERPERAL HÆMORRHAGE.

AT a stated meeting of the Academy, held January 18th, DR. PAUL F. MUNDÉ, editor of the *American Journal of Obstetrics*, read a paper on the above subject. After speaking of the prominence which had been given to the subject of primary post-partum hæmorrhage, he said that that of metrorrhagia occurring later in the puerperal period had received comparatively little attention. The older writers, if mentioning it at all, simply alluded to the fact of its possibility; but some of the more recent authorities, among whom were mentioned Barker and Playfair, devoted more or less space to its consideration. All the latter acknowledged their indebtedness to the important paper of McClintock, which was published in 1851, and was really the first contribution of any value to the subject, as well as to the later communication of Bassett, of Birmingham, which appeared in 1872. At the meeting of the American Gynecological Society in 1880 Prof. Theophilus Parvin, of Indianapolis, read an exhaustive paper on secondary puerperal hæmorrhage, which was afterwards published in volume v. of the Transactions of the Society; but as he was not present at the meeting the matter had escaped his notice until after he had prepared the present paper, when his attention was called to it by a friend. As the case which formed its basis presented certain features, however, which were not alluded to by Dr. Parvin, and especially as secondary hæmorrhage, though more rare, was scarcely a less serious danger than primary, he did not consider that any apology was needed for his presenting the subject to the Academy.

The case to which he alluded was the following: On the 1st day of August, 1882, he was hastily sum-

moned in consultation to see Mrs. S. G., twenty-five years of age, the mother of three children, who had been confined with her fourth child on the 16th of July. Labor having lasted twenty-one hours efforts were made to apply the forceps, but they twice slipped off the head. One hour later the cranium was perforated and the forceps again applied, but again they slipped. The head was then crushed with the cephalotribe and the delivery effected, when it was found that the child was the subject of hydrocephalus. The placenta was adherent, and there was quite a profuse hæmorrhage. This was readily controlled by ergot and the other agencies employed, but it was found that the cervix had been quite badly torn during the labor. The day following the temperature was 102° F. and the pulse 120, while the lochial discharge was very fetid. This condition was corrected, however, and the patient did well until the eleventh day, when the lochia again became fetid. The temperature went up once more, and ranged between 101° and 103° F. All appetite for solid food was absent, but she was able to take a considerable quantity of fluid nourishment and stimulus. On the fourteenth day a profuse hæmorrhage set in, but as it was so long after the delivery it was not considered of any importance, and the medical attendant was not summoned until after the patient had become very much exhausted in consequence of the loss of blood. Ergot was administered, and the hæmorrhage also controlled by injections of hot water, after which the vagina was tamponed. When Dr. Mundé reached the bedside he found the fundus on a level with the umbilicus, and that the right cornua reached to a considerably higher point than the left. The hæmorrhage had then entirely ceased; but, fearing that this cessation was only temporary, and that its return would certainly prove fatal, he removed the tampon in order to secure a contracted condition of the uterus. As he did so quite an offensive odor was perceptible. On introducing his hand into the uterus he found it filled with coagula, and while removing these he found that at the fundus the endometrium was in a soft and pulpy condition, apparently similar to that found after death in cases of septic puerperal endometritis. No portion of the placenta could be anywhere detected. The uterine mucous membrane seemed to be much thickened, and each horn of the uterus to be separated by a circular band. Having taken out all the coagula, of which there were several handfuls, he introduced a long tube and thoroughly washed out the cavity with hot carbolized water. Then, placing a large cylindrical speculum in the vagina, he injected half an ounce of pure tincture of iodine into the uterus, and finally put a cotton tampon in the vagina as a safeguard against further hæmorrhage, at the same time requesting that the uterus should be very strictly watched, so that if there should be any return of the hæmorrhage it might be detected at once. The patient was now in a state of extreme exhaustion, but experienced no pain, nor did any shock follow the measures adopted. The pulse became so weak that brandy and ammonia were administered by hypodermic injection. Notwithstanding the exhausted condition it was thought advisable to give ergot hypodermically also, so as to leave no precaution against a return of the hæmorrhage untaken. Bottles of hot water were placed at the feet, and upon leaving Dr. Mundé suggested that after the tampon was removed from the vagina injections of tepid water should be made from time to time in order to prevent any accumulation of coagula.

After he had gone the patient sank into a state of such profound collapse that the attendants despaired of her recovery from it, but she afterwards rallied, and when he called the next day he found her feverish, and with a hectic flush, which, with a sweetish odor which there was about her breath, made him fear the presence of septic endometritis. He washed out the uterus with a solution of permanganate of potassium of the strength of one sixth, and ordered ten grains of salicylate of soda to be given every three hours. He could not but regard the prognosis as very unfavorable. As he was at the time in attendance on another case of confinement, Dr. Mundé now withdrew from the case, and its subsequent history was learned from the attending physician. The temperature varied from 101° F. to 103° F., and the stomach became very unmanageable. After a few days injections of sulphate of quinine, one drachm to the quart of water, were resorted to, and seemed to be followed by good results. The patient, however, recovered very slowly. Altogether Dr. Mundé thought it was the most desperate case which he had ever met with in which recovery followed.

He then proceeded to speak of secondary puerperal hæmorrhage in general, and first enumerated the causes of this accident as given by Bennett and Barker. To these he thought distended urinary bladder should be added, as suggested by Winkel. Playfair, quoting a Brazilian author, had spoken of malarial congestive chill as a cause. Barker mentioned five cases due to malaria in his paper on malarial puerperal fever, and Dr. H. T. Hanks had also reported one similar case. Winkel laid special stress on too early getting up as a cause, and diseases of the inner surface of the uterus (and chiefly endometritis) were spoken of by Winkel alone. In the case described in the paper, although, fortunately, there was no opportunity to verify the matter by an autopsy, Dr. Mundé believed that there was endometritis with a hyperplasia resulting in a fungoid proliferation of the mucous membrane, and finally a superficial slough of the hyperplastic material. At the time that he saw it, however, he was not aware that puerperal septic endometritis had ever been assigned as a cause of secondary hæmorrhage.

(2.) The date of secondary hæmorrhage varied very greatly according to circumstances. As a rule, it might be stated, that the greater the attention that was paid to securing contraction of the uterus immediately after labor, and to its subsequent watching, the less would be the probability of the accidents occurring. Hence in well regulated lying-in hospitals it was found to be very rare. Friction should ordinarily be made over the uterus for half an hour after delivery, by which time the organ was usually permanently contracted. In addition ergot should always be given after labor. Secondary hæmorrhage occurred, perhaps, most frequently about the tenth day, and was then generally attributable, in part, at least, to the exertions made in getting up. Hæmorrhage coming on after the patient had gotten up was due, as a rule, he thought, either to the retention of a portion of the placenta or to endometritis. Barker referred to cases occurring as late as the fifth and sixth weeks after confinement. Sometimes there was prolonged oozing, and this was not unfrequently due to laceration of the cervix. It was a mistake, however, he believed, to put sutures in the cervix at an early period after labor.

(3.) *Diagnosis.* In cases of hæmorrhage occurring late it might sometimes be necessary to dilate the uterus with a sponge-tent in order to make an examination of the cavity with the finger.

(4.) The significance of secondary hæmorrhage depended partly on the amount of blood lost, and partly on the origin of the flow. In the case related there could be no doubt that a very slight additional loss of blood would have destroyed life.

(5.) *The means of checking the hæmorrhage.* Pure tincture of iodine, as recommended by Lente and others in puerperal hæmorrhage, and by Emmet in non-puerperal hæmorrhage, he believed to be very efficient as a hæmostatic, and also an excellent disinfectant. It did not form hard coagula, like the persulphate of iron, although Dr. H. P. C. Wilson, of Baltimore, had found that when iron and glycerine were used together in equal parts, these hard coagula could be avoided. The use of a cylindrical speculum was to be recommended in making such injections, on account of the protection which it afforded to the vulva and vagina. The tampon was more applicable in secondary than in primary puerperal hæmorrhage; but it was never to be employed unless the uterus was so contracted, and it was possible to have the fundus so carefully watched that no internal hæmorrhage could take place. In the case related, it would be remembered, the hæmorrhage did not come on until more than two weeks after delivery, and the tampon was used simply to guard against external hæmorrhage. Ergot was, of course, a valuable agent. In the case mentioned it might, perhaps, have been omitted on account of the exhausted condition of the patient, for fear of its producing further collapse; but it seemed to do no harm, and its use was justified on the ground that any return of the hæmorrhage whatever would probably have proved fatal. Very likely the hot-water injections alone might have been sufficient; but it was thought best to take no chances in the critical condition of the patient. As a rule, then, the same measures were applicable in secondary as in primary hæmorrhage. When pelvic congestion was present saline purgatives were called for. In the earlier periods after labor it was often necessary to clear out the coagula from the uterine cavity. When laceration of the cervix was the cause of hæmorrhage appropriate astringents were to be applied by means of cotton. In this paper, Dr. Mundé said, no attempt was made to go over the whole ground of secondary puerperal hæmorrhage. He aimed merely to add another case to those already on record, and to discuss a few points that had arisen in connection with it.

In conclusion he presented a number of simple rules, the observation of which, he said, would greatly diminish the chances of both secondary and primary hæmorrhage, the principal of which were the following: Always keep a compressing and supporting hand over the fundus from the time the head appears at the vulva until the uterus is permanently contracted after the delivery of the placenta. Use no haste in removing the placenta. Give ergot immediately after the birth of the child. If chloroform has been used during labor, or there is much exhaustion present, administer the ergot hypodermically; and the needle should be inserted to the depth of an inch in the abdominal walls in the vicinity of the umbilicus. It is always well, under any circumstances, to be prepared to give a hypodermic injection of ergot at a moment's notice. Always have ice ready at hand. It is more agreeable to the patient than hot water, and there is often more or less difficulty in procuring hot water at the right temperature; as it is apt to be either so hot as to be scalding, or else not sufficiently hot to do any good. Be sure that no coagula are left in the uterine cavity. Put the child to the breast at an early period. Apply an equally tight abdominal bandage after the delivery of the placenta, and if there is any tendency to hæmorrhage, place a compress under it in the position of the uterus. Examine the conditions of the perinæum and cervix carefully. See that the bladder is not allowed to become distended. Keep the patiently perfectly quiet for at least ten days.

A second paper, the subject of which was Eczema: Its Pathology, and the Principles of its Treatment, was read on this occasion by Dr. E. B. Bronson.

Recent Literature.

Dr. Norris's Third Corpuscle of the Blood. A Criticism and a Refutation. By Mrs. Ernest Hart. Reprinted from the *London Medical Record*, October 15, 1882. London: 12 pages.

Dr. Richard Norris, of Birmingham, England, claims to have discovered that the white corpuscles of the blood shed the body of the cell by peeling off, setting the nucleus free; the latter then enters the circulation as a colorless disk, which is ordinarily invisible because it has the same refractile index as the *liquor sanguinis*; the disks gradually become colored by the endogenous secretion of hæmaglobin. He then applies this history to set aside many established views concerning the physiology and pathology of the blood. He has presented his own opinions in an octavo volume illustrated by numerous plates. It would be a revolution to accept Dr. Norris's views, to which, however, we could give little credence *a priori*. His conclusions have been subjected to telling criticisms by Mrs. Ernest Hart. Norris's principal observation was that by certain methods of treatment colorless disks could be found in the blood and photographed. Mrs. Hart has repeated many of his numerous and varied experiments, and shows that the methods employed create the colorless corpuscles out of the red corpuscles by removing in one manner or another the hæmaglobin. The basis of Norris's theories is thus taken away, and with the base fall all his far-reaching deductions built on it. We think Mrs. Hart has made, in a very suitable and impersonal manner, a severe arraignment of theories that can hardly be deemed well established.

Variola. A Series of Twenty-One Heliotype Plates Illustrating the Progressive Stages of the Eruption. Boston: Samuel A. Powers. 1882.

These plates, twenty-one in number, represent the appearance of variola at different stages of the eruption. The first sixteen pictures show its appearance on the same patient from the third to the fourteenth day. The other plates are also of patients in the Boston Small-Pox Hospital, who were under the care of the City Physician. One of these plates appeared in the last annual report of the Boston City Physician.

The heliotypes are published and copyrighted by Samuel A. Powers, superintendent of the hospital, who, we understand, took the photographs.

Medical and Surgical Journal

THURSDAY, FEBRUARY 1, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

REGULATION OF PLUMBING IN BOSTON.

THE proposed ordinance for the regulation of plumbing in Boston, now under consideration by a conjoint committee of the city government, contains certain curious and noteworthy conditions. It provides for an inspection of the plumbing of all new buildings, enumerates the requirements, and provides that no water shall be admitted to the building until these requirements are met. The objects of such a regulation are supposed to be the maintenance of the public health, but in the bill no mention is made of the Board of Health.

Such regulation of a system of piping so easily adapted to the ventilation of the public sewers into sleeping-rooms and public work-rooms, and so intimately connected with the health of so many individuals who can have nothing whatever to do with its proper construction, is a most worthy subject for the attention of a city government. The evils which may follow careless plumbing in tenement houses, hotels, and work-shops, are sufficiently evident to make it a matter of vital interest as regards the public health. According to existing regulations any evil which may arise comes directly under the supervision of the Health Board, and to them is committed such powers as the public good demands. They have at present the right of interference in all existing plumbing whenever a nuisance can be shown to exist, and to them the public look for instruction and advice upon the subject. They possess already knowledge and experience upon this intricate subject, and to them naturally the preliminary inspection should be referred. Should the proposed regulation become a city ordinance Boston would be the only city, we believe, where plumbing is regulated at all, where it is not under the supervision of the local health board. Undoubtedly it is better that the matter should be under the control of the Inspector of Buildings than entirely without regulation, but the present draft of a bill has no clause looking to present or future amendment in any evil, however great, which may be present in plumbing as it now exists.

— The coldest inhabited town in the world is, according to *L'Union Médicale*, not Irkoutsk, as has been formerly believed, but Verchojansk, in Siberia. In this place the mean temperature during the month of January, was —43° F., in February, —56° F., in March, —37° F. Once the thermometer recorded —81.4° F.

REGULATION OF ATHLETIC SPORTS AT HARVARD UNIVERSITY.

IN accordance with our promise in the last issue of the JOURNAL we revert to the part of the last report of the President of Harvard University which concerns itself with the regulation of athletic sports among the students.

A first committee of the Faculty, appointed last spring to examine into the existing methods of maintaining and conducting out-of-door sports, conferred with both graduates and under-graduates specially interested in them, and reported that a standing committee of the Faculty ought to be appointed to regulate athletic sports, and that those institutions whose students are represented in the Collegiate Base-Ball League should be requested to unite with Harvard in prohibiting games with professional clubs. These recommendations were adopted, the standing committee was appointed, — the Faculty thus assuming for the first time a direct responsibility for the character and extent of athletic sports, — and communication with the other colleges resulted in a general agreement to unite in prohibiting base-ball games with professional clubs, Yale alone refusing to concur, on what grounds we neither know nor are able to surmise.

The committee of the Harvard Faculty has, in addition, forbidden all college clubs to play or compete with professional clubs, and decided that no student shall belong to a boat crew unless he can swim, and that no student shall engage in any athletic contest until he has been examined and pronounced fit by the director of the gymnasium. The number of match games of ball has been reduced and confined to Saturdays, and professional "trainers" have been denied access to the grounds and buildings of the university except by special permission of the committee.

These restrictive measures have, on the whole, the President reports, commended themselves to the judgment of the whole body of students and graduates, and even the young men most active in athletic sports had perceived that the college competitions were running to excess. He justly remarks that "when games are made a business they lose a large part of their charm; and college sports cannot approach the professional standard of excellence without claiming the almost exclusive attention of the players, and becoming too severe, monotonous, and exacting to be thoroughly enjoyable. The most devoted college athletes have repeatedly rebelled against what they thought too strict or too prolonged training. Moreover, a high standard of excellence tends to make the number of persons who actually take part in athletic sports very small, the considerable number of tolerably good players being driven from the field, and reduced to the unprofitable position of mere lookers-on."

As the result of an investigation as to standing on the college rank lists of students conspicuous in athletic sports, the committee found that of the eighty-four different students who were members of the university crew, base-ball nine, or foot-ball eleven from 1873 to 1881, more than a quarter stood above the middle of their respective classes, and the average

standing of the whole number was represented by seventy-two in a supposed class of one hundred. It was noticed that the base-ball players had on the average a lower rank than the rest, — seventy-six in a supposed class of one hundred, — the explanation probably being that the base-ball campaign occurs in April, May, and June, at the period of the annual examinations. The perseverance, resolution, and self-denial necessary to succeed in athletic sports when associated with lack of interest in scholarly pursuits or with dullness or slowness of mind are still very positive qualities, and that they may prove very valuable in the active occupations of later life is fully recognized by the college authorities.

"In the recent conferences between the committee of the Faculty and the students and graduates interested in athletic sports, and in the general discussion of the subject throughout the university," President Eliot says that "very little difference of opinion has been exhibited as to what is desirable in the conduct of these sports. It is agreed on all hands that the increased attention given to physical exercise and athletic sports within the past twenty-five years has been, on the whole, of great advantage to the university; that the average physique of the mass of students has been sensibly improved, the discipline of the college been made easier and more effective, the work of many zealous students been done with greater safety, and the ideal student been transformed from a stooping, weak, and sickly youth into one well formed, robust, and healthy. It is also agreed that athletic competitions, though necessary to the maintenance of a proper interest in the general subject, may easily run into excess, and on that account need to be kept within discreet limits; and that the whole spirit of college sports and contests should be that of amateurs who are amusing themselves, and not that of professional players who are earning a living, and seeking a reputation for its pecuniary value."

This whole subject is one of extreme importance to the youth who are going to be the men of the country, and we are glad to feel that it has thus far, since receiving their direct attention, been managed with so much judgment and discretion by the college authorities at Cambridge.

PHILADELPHIA WATER SUPPLY.

A CURIOUS wager is now being decided in Philadelphia, which is not without medical interest. The Schuylkill River, which supplies the drinking water to the greater portion of the city, has lately been quite low, and covered with ice; as a result the water has had a bad taste and odor, and by most persons it is regarded as unwholesome. To test it a physician is said to have offered fifty dollars as a prize for any one who would have the temerity to drink a quart of it for ten days in succession. This offer has been accepted, and at a variety entertainment in the upper portion of the city, each evening, the doomed man comes on the stage, the stipulated amount of water is brought in, and he takes his draughts to slow music before a sympathetic audience. Although he hastens to neutralize it with sundry alcoholic mixtures, it is not believed that he can hold out to the end, for it is the agreement that if he vomits or dies he will lose the prize.

The explanation given by the authorities of the bad quality of the water is that some old gas tanks have been washed up at Reading, and the refuse allowed to be discharged into the Schuylkill. The low state of the water makes the contamination more perceptible, while the ice has deprived it of the purifying action of the air. The general complaint against the water has attracted unusual attention to the water supply. Unfortunately, along the river, above the city, are a number of manufacturing towns, which drain into the Schuylkill, and as each year the capacity of the river gets smaller compared with the size of the city, it is evident that measures must soon be taken to protect the water from pollution. A bill has just been introduced into the State Legislature creating a commission to prevent the pollution of streams, etc., which it is hoped will promptly pass, as there is no State Board of Health to look after sanitary interests, and if there were one the pollution of streams might be considered more important to manufacturers than their purity to the general health.

MEDICAL NOTES.

— The first case of small-pox known to have occurred in Boston for six months was discovered and removed to the Small-Pox Hospital, on Thursday, January 25th. The case occurred in a little girl of five, who with her mother returned from Baltimore on the 19th, after a visit of some months in that city.

— Numerous recipes are being given in the medical journals for making koumyss, or rather for making a substitute for the preparation of mare's milk, that alone properly deserves that name. The simplest of the directions is as follows: Fill a quart champagne bottle up to the neck with pure fresh milk; add two tablespoonfuls of white sugar, after dissolving the same in a little water over a hot fire; add also a quarter of a two cent cake of fresh compressed yeast; then tie the cork on the bottle securely, and shake the mixture well. Place in a room of the temperature of 50° F. to 95° F. for six hours, and finally in the ice-box over night. Drink in such quantities as the stomach may require. This, as will be seen, is very inexpensive. Care should be taken not to allow it to be used if it contains curds, which indicate too much fermentation; precaution should be observed in opening the bottle on account of the effervescent quality of the product. Some observers recommend a dilution of the milk with water, varying from one seventh to one half before the fementation.

— The Lamson affair in England ends with a touch of grim humor. The murderer had a life insurance of £1000, payable to his widow. Immediately after his execution claim was entered for its payment. The company objected on the ground that the assured had

died neither from natural causes, disease, nor unavoidable accident. The estate claimed, however, that though the death was a violent one, it was in no sense like a suicide, which would, of course, have annulled the policy. The assured had certainly not voluntarily delivered himself to the executioner; on the contrary, it could be maintained that he had yielded only with reluctance. The company paid the claim under a formal protest.

— The *Maryland Medical Journal* intimates that the medical department of the Johns Hopkins University will be only available to those who shall have taken the preliminary course of three years leading to the degree of A. B., and will have a curriculum extending over at least four years, so that candidates for its degree will have had to study for seven years. Blessed is the college, and especially the medical school, which is so munificently endowed that it can fix its standard of scholarship independently of the necessity to make a living for itself; in fact, which can from the first adopt the position of the sought and not the seeker.

— It is pointed out by an exchange that the "*Convallaria majalis*," *vulgo*, lily of the valley, recently so strongly recommended by Russian physicians as a substitute for digitalis, and otherwise, is described in Ray's catalogue, Plantarum Angliæ, published in 1670, and dedicated "*clarissimo viro* D. Francisco Willughby, *armigero, amico et Mæcenati suo, plurimum honorando*," to whose labors he owed much of his materials. Mr. Ray gives the uses of the plant in medicine as follows: "Usus præcipue in morbis capitis frigidis, ut apoplexiâ, paralysi, vertigine, epilepsiâ; hinc et in lipothymiâ. Insigne itidem errhinum exhibent pulverisati flores. — *Schrod.*" As lipothymia is an old name for syncope, and is coupled with vertigo, a notion of its strengthening the heart's action seems to underlie the whole. Indeed, the apoplexy referred to may have been intended for cerebral anæmia.

— A portrait of Oliver Wendell Holmes by Alexander, of New York, to be presented by his former pupils to the Harvard Medical School, has been on private exhibition for a few days in this city.

— The Medical Society of New York County held a special meeting on January 29th for the purpose of showing the State Medical Society what the feeling in the metropolis is in regard to the matter of the code. On motion of Dr. D. B. St. John Roosa the following resolution was passed: —

Resolved, That the Medical Society of the County of New York approves of the amendment to the by-laws of the Medical Society of the State of New York, adopted at the annual meeting in February, 1882, and that we indorse the system of medical ethics therein substituted for the former one especially because it leaves the matter of consultation to the discretion, the honesty, and the humanity of the individual practitioner.

— The death of another centenarian has recently taken place at Morristown, New Jersey. This was Mrs. Maria Appley, who is said to have been one hundred and four years of age. She took part in Washington's funeral procession in New York as one of the young girls who personated the thirteen original States. She retained her faculties up to the time of her death, and frequently insisted on being allowed to do the family washing even after reaching her hundredth birthday.

— Dr. A. Hiller, of Berlin (in *Zeitschrift für klin. Med.*, Bd. iv.), reviews the various cathartics that have been recommended for hypodermic use, and concludes that none of them is at once reliable and free from objections. Aloin is uncertain in its action, and has been given in doses of 0.8 without effect, and citrullin (from the colocynth), cathartinic acid (from senna), elaterin, enonymin, baptisin, etc., are all found to be either uneffective in moderate doses or to cause great pain and local inflammation. So that the writer concludes that pharmaceutical research is still inadequate for the solution of this problem, which, however, he believes will some time be solved.

— Among the new medical journals are two which promise to be worthy a long and honored life. They are both French and devoted to special subjects. The first is the *Revue Mensuelle des Maladies de l'Enfance*, and is to include hygiene, medicine, surgery, and orthopædics. It is published under the direction of Doctors Cadet De Gassicourt, Physician to the Hôpital Trousseau and De Saint-Germain, Surgeon to the Hôpital des Enfants-Malades, with numerous collaborateurs. The second is, we believe, unique in its field. It is the *Annales des Maladies des Organes Génito-Urinaires*, with the name of Professor Guyon at the head of its list of editors and collaborateurs.

— Dr. J. H. Girdner describes and figures a new phymosis forceps, to be introduced, with the blades approximated, into the orifice of the prepuce. When its extremity touches the glans, the foreskin being drawn forward, at the release of a spring the blades fly apart, carrying on each of their outer surfaces a sharp point which transfixes both mucous membrane and skin. The forceps then being drawn upon, the amputation is made, the steel points preventing the rolling of the mucous and cutaneous layers upon each other, which is so annoying an accident.

— A bill to create a State Board of Health will be again submitted at the present session of the Pennsylvania Legislature.

NEW YORK.

— The Hospital Saturday and Sunday collections this year, much to the disappointment of those interested in the movement, amounted only to a little over $20,000. The collections of 1879, 1880, and 1881 aggregated $113,362, or an average of nearly $37,800 for each year.

— The report of the Vaccination Bureau shows that in the year 1882 the physicians of the Board of Health performed 99,661 vaccinations. In the last seven years nearly 500,000 persons have been vaccinated by members of the bureau.

— Dr. George M. Beard, the well-known medical writer and specialist in diseases of the nervous system, died, after a brief illness, on the 23d of January. A post-mortem examination, made by Dr. T. E. Sat-

terthwaite, showed that death was due to embolic pneumonia resulting from an alveolar abscess of the superior maxilla. The funeral services in New York were held at the Broadway Tabernacle on Friday afternoon, January 26th, and the pall-bearers were Drs. A. D. Rockwell, James L. Little, W. A. Hammond, T. H. Kellogg, D. Goodwillie, Charles L. Dana, Messrs. R. T. Bush, and W. A. Crofut. The remains were then taken to Andover, Mass., where the final services took place in the seminary chapel on Saturday morning, January 27th. Dr. Beard was only in the forty-fourth year of his age, and by his death the profession loses one of the most original and industrious of its thinkers and writers.

CHICAGO.

— *The Preliminary Examinations.* — The rule of the Illinois State Board of Health, that after the present college session diplomas will not be recognized from colleges which do not require a matriculation examination, finds all the colleges of the State substantially, and by previous arrangement and announcement, complying with the condition. There could of course be but one opinion as to what course the local schools would pursue. Among the profession, however, there is a good deal of speculation as to how schools outside of the State will treat the rule. A graduate of a college not requiring the examination, coming into the State to practice, hereafter will be obliged, before securing his license, to undergo an examination by the State Board of Health. Now, will the large schools east of Illinois, many of whose graduates annually locate in the State, allow their alumni to be put to this disadvantage and inconvenience? It certainly will lessen their classes to some degree if it is known that this sort of an embarrassment is to be affixed to graduates who may or might desire to settle in any one of the large and growing States of the West. Candidates for a degree will not like, by attending a particular college, to invite such an embarrassment. Colleges wishing to avoid this must conform to the rule, or, by making a test case in court, cause, if they can, the rule to be set aside. There are not wanting men who believe that if a test case was made the Board would find itself without authority to establish such conditions. Others believe the Board has not exceeded its authority. There has been some gossip in professional circles about the prospect of the present Legislature abolishing the Board altogether; but this is not likely to occur, as there is a popular belief that it has driven large numbers of quacks out of the State, and as the Governor, in his annual message, has commended the work of the Board in a most flattering manner.

— The friends of Dr. E. Fletcher Ingals will be glad to know that he has been made a professor of laryngology in Rush College.

— The St. Luke's Hospital is to have its new building completed next summer or autumn. This will be a permanent structure of brick, and will greatly enlarge its capacity. It will front on Michigan Avenue, which is now under the control of the South Park Commissioners, and is a permanent boulevard leading to the Parks. The building will reach entirely across the block, and front also, as at present, on Indiana Avenue. It will be provided with all the modern improvements in hospital fitting, including a snug operating amphitheatre, where its staff expect to give regular clinics. This is one of the most useful and commendable hospitals in the city.

— The Illinois Training School for Nurses is having built, near Cook County Hospital, a Home for a residence for its nurses. The necessary funds have been contributed by the public. The school has been very successful at the County Hospital. Indeed, this is about the only part of the hospital organization of which there has been no complaint from any one.

Miscellany.

ANNUAL REPORTS OF THE STANDING COMMITTEES OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

The following committee reports were made at the annual meeting of the College of Physicians, Philadelphia, January 3d last.

The Publication Committee reported a larger contribution of interesting papers to the forthcoming volume of *Transactions* than has ever been made before.

The Library Committee reported that the library contains 23,653 volumes, of which 15,901 belong to the general library, 6208 to the "Lewis Library," and 1544 are duplicates. During the year 1882, the additions to the library amounted to 1234 volumes. A complete card catalogue of authors and subjects has been made of the "Lewis Library," and that of the general library is well advanced. The library of the late Dr. H. Lenox Hodge, containing 1665 volumes, is deposited with the college in trust. The constant and rapid growth of the library obliged the committee to urge a liberal appropriation for the extension of the shelf-room and the payment of the librarian and the assistant charged with preparing the catalogue. Next to the library of the Surgeon-General's office, that of the College of Physicians of Philadelphia is the largest medical library in the United States.

The Mütter Museum Committee urged the necessity of providing increased accommodation for the museum.

During the last year a large number of valuable preparations have been received: —

From Framond, of Paris, 100 wax specimens illustrating diseases of the eye; 22 preparations (natural) showing dentition from early life to old age; 20 casts of female pelves taken from noted cases of deformity; 1 large wax model of thoracic duct and lymphatics; 2 rubber models of pelvic viscera, male and female; 1 wax preparation of confluent small-pox; 1 wax preparation of syphilitic disease of scalp; 4 natural lymphatic injections of foot, hand, and stomach, also an injection of the canal of Fontana; and 1 adult skeleton, mounted at Royal College of Surgeons, London.

They have also received from Rohon, of Vienna, six mounted skeletons, illustrating stages in development, with known age and history to each.

They have procured and had mounted the skeleton of a noted case of hydrocephalus.

Also through Dr. Hays, the committee obtained the body of a cyclops which was dissected, and reported upon by Drs. R. Meade Smith and A. J. Parker.[1] A good plaster cast and two drawings were made from it. Other preparations of importance were also received.

The Committee on the Directory for Nurses reported that the Directory was opened May 15, 1882. Rooms for the secretary were fitted up, and the telephone and telegraph introduced. Circulars and blanks to the number of 8500 were prepared and widely distributed to all the physicians in Pennsylvania, New Jersey, and Delaware, and to the summer hotels within easy reach of this city. The coöperation of the two training-schools for nurses (the oldest two in the country) was secured, and the medical and daily press of the city showed a very friendly spirit, and assisted us in making the Directory known. The following are the rates of charge adopted: For information leading to the engagement of a nurse between 7 A. M. and 6 P. M., one dollar; between 6 P. M. and 10 P. M., two dollars; between 10 P. M. and 6 A. M., three dollars; for wet nurses, uncertified, five dollars; for wet nurses, certified (after careful medical examination of mother and child), ten dollars; for finding and sending a nurse, an additional dollar. Up to December 1 the number of applications for registration has been 296. Fully registered, 214; approved and awaiting registration, 17; disapproved, 19; stricken from roll for grave faults or defects, 2. Of the registered nurses there are 26 males and 187 females; 35 graduates of training-schools; 165 non-graduates; manipulators, male and female, 11; cuppers and leechers, 3.

The number of calls for nurses has been 342 during the seven months, an average of about 50 a month. We have furnished as many as 8 in a day, and 5 to a single family. One of the most important results achieved through the Directory is the promptness with which calls to grave emergencies are met. Another and very marked advantage of the Directory is, that we not only give information as to disengaged nurses, but, if desired, will find and send them to the patient. This saving of time and trouble to applicants is often very desirable, and the small extra fee charged for the service (one dollar) is very gladly paid. Especially is this service valuable to patients out of the city.

We have also undertaken to supply wet nurses. We have had 35 applications, but have only been able to supply 13, and we beg especial attention to this fact, in order to obtain many more of this class of nurses.

Our expenses have exceeded our income by a very large amount, and had it not been for the generous contributions of many friends, chiefly through Mrs. Weir Mitchell, the Directory could not have been placed on a firm foundation at its start. Next year it s hoped that it will be about self-supporting.

— Report hath it that Charles Reade, being asked by "Ouida" to suggest a suitable name for her dog, advised that he be called Tonic, because he was a mixture of bark, steal, and whine.

[1] See the American Journal of the Medical Sciences for July, 1882.

ARTIFICIAL FEEDING FOR INFANTS.

IN a clinical lecture delivered at the Pennsylvania Hospital by Dr. Arthur V. Meigs, and reported in the *Medical News*, a formula is given for an artificial milk-food, constructed in accordance with the author's own analysis of human milk. It contains the same elements that are found in human milk, and, it is claimed, in more nearly the same proportions than any other food heretofore recommended. It consists of two parts of cream, one of milk, two of lime water, and three parts of a solution of milk sugar of the strength of seventeen and three fourths drachms to the pint of water. The milk to be used should be good ordinary cow's milk, and not the very rich milk of Jersey or other high-bred stock, and the cream in the same way should be such as is usually sold in cities, and not too rich, containing about sixteen or seventeen per cent. of fat. The quantity of this food taken by a newborn infant should be two or three fluid ounces every two hours, and if it thrives, it will soon take as much as a gill every two hours.

The best way to prepare and use this food is to order five or six packages of milk sugar, containing seventeen and three fourths drachms each; the contents of one of these to be dissolved in a pint of water, and each time the child is to be fed, let there be mixed together, and then warmed, three tablespoonfuls of the sugar solution, two of lime water, two of cream, and one of milk. This makes about a gill, and as much of it as the child does not take should be thrown out, and a fresh mixture made for the next feeding. The solution of sugar should be kept in a cool place, and at once thrown away if it sours, as occurs if kept more than a day or two in warm weather. The dry sugar keeps indefinitely, and is easily dissolved in warm water. A pint bottle should be kept for the purpose of containing the solution, to serve also as a measure of the quantity of water to be used with each package dissolved, and also to save further measuring.

The preference of Dr. Meigs for cream as a basis of the food is due to the fact that if milk is used there is too much casein, though the fat is in the right proportion, and if condensed milk is employed the casein is right, but there is too little fat. It will be observed that, as the fat and casein bear the same relative proportion to each other as they do in pure cow's milk, it would be impossible to dilute or mix it in such a way as to have the elements in the proportions contained in human milk, for by increasing the quantity of condensed milk used, to get more fat, we add at the same time too large an amount of casein.

— The *Medical News* has been investigating the honesty of manufacturers of quinine pills and finds that of seven of them only two give good weight. The others show a deficit in the amount of the drug to be found in an alleged "two-grain pill" varying from five to twenty per cent. With commendable frankness the paper publishes the names of the manufacturers with the results of the quantitative analysis. In the prices of these different specimens there was a wide variation — the range being from $1.70 to $2.75 per hundred. The latter price was that of the most fraudulent article. It is but fair to say that the manufacturers reflected upon have since published analyses which they claim show the honesty of their work.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 20, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	622	236	17.14	18.97	7.08	6.59	—
Philadelphia	846,984	407	123	18.13	10.29	10.05	1.47	1.88
Brooklyn	566,689	280	108	16.02	21.00	7.83	3.92	—
Chicago	503,304	—	—	—	—	—	—	—
Boston	362,535	172	53	15.66	14.25	5.22	2.90	—
St. Louis	350,522	176	61	31.36	9.52	14.00	9.52	—
Baltimore	332,190	300	125	43.99	7.59	8.59	2.44	30.36
Cincinnati	255,708	120	47	33.33	8.33	4.99	9.16	—
New Orleans	216,140	158	36	34.83	10.13	—	—	15.88
District of Columbia	177,638	80	29	11.25	13.75	2.50	7.50	—
Pittsburg	156,381	69	21	29.00	10.80	7.25	—	2.50
Buffalo	155,137	60	25	34.44	4.92	8.20	13.12	—
Milwaukee	115,578	57	24	19.25	14.05	10.50	3.50	—
Providence	104,857	51	12	29.42	5.88	2.92	1.92	—
New Haven	62,882	29	12	27.58	51.72	—	3.45	—
Charleston	49,999	32	8	9.36	6.25	—	—	—
Nashville	43,461	31	9	3.23	31.15	3.23	—	—
Lowell	59,485	20	7	40.00	—	20.00	5.00	—
Worcester	58,295	18	6	11.11	16.66	—	—	—
Cambridge	52,740	15	7	26.66	6.66	20.00	—	—
Fall River	49,006	22	10	22.72	22.72	4.56	—	—
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	10	3	—	40.00	—	—	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	9	1	—	—	—	—	—
New Bedford	26,875	—	—	—	—	—	—	—
Somerville	24,985	9	1	22.22	—	11.11	—	—
Holyoke	21,851	10	6	20.00	10.00	—	—	—
Chelsea	21,785	8	3	25.00	—	12.50	—	—
Taunton	21,213	7	2	28.56	—	28.56	—	—
Gloucester	19,329	3	1	—	33.33	—	—	—
Haverhill	18,475	4	0	25.00	—	—	—	—
Newton	16,995	5	3	—	20.00	—	—	—
Brockton	13,608	5	1	—	—	—	—	—
Newburyport	13,537	7	0	—	14.28	—	—	—
Fitchburg	12,405	5	2	60.00	—	40.00	—	—
Malden	12,017	6	2	33.33	—	—	—	—
Eighteen Massachusetts towns	133,939	34	8	14.71	5.88	5.88	—	—

Deaths reported 2841 (no report from Chicago): under five years of age 1002: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 650, consumption 434, lung diseases 383, diphtheria and croup 208, small-pox 127, scarlet fever 97, typhoid fever 70, diarrhœal diseases 44, erysipelas 21, measles 20, malarial fevers 19, cerebro-spinal meningitis 18, whooping-cough 17, puerperal fever nine. From *typhoid fever*, Philadelphia 12, Providence 10, St. Louis and Pittsburg seven each, New York and New Orleans four each, Boston, Baltimore, Cincinnati, Buffalo, and Charleston three each, Brooklyn two, District of Columbia, Milwaukee, Lowell, Worcester, Fall River, Holyoke, Haverhill, Milford, and Amherst one each. From *diarrhœal diseases*, New Orleans 15, New York 11, Boston, St. Louis, New Haven, and Fall River three each, Buffalo two, Providence and Chelsea one each. From *erysipelas*, Philadelphia five, New York three, Boston, Cincinnati, New Orleans, Pittsburg, and Lowell two each, Milwaukee, Worcester, and Fitchburg one each. From *measles*, New York 11, Boston and Cincinnati three each, New Haven two, Baltimore and Somerville one each. From *malarial fevers*, Brooklyn seven, New Orleans four, New York three, St. Louis and Baltimore two each, Cincinnati one. From *cerebro-spinal meningitis*, New York seven, New Orleans four, Buffalo two, Baltimore, Milwaukee, Lowell, Holyoke, and Woburn one each. From *whooping-cough*, New York four, Cincinnati and Pittsburg two each, Philadelphia, Brooklyn, New Orleans, Providence, New Haven, Lowell, Cambridge, Chicopee, and Woburn one each. From *puerperal fever*, Boston, St. Louis, and Pittsburg two each, Philadelphia, Buffalo, and New Haven one each.

Two hundred and thirty-eight cases of small-pox were reported in Baltimore, Brooklyn one, Pittsburg one; diphtheria 27, scarlet fever 36, typhoid fever six, in Boston; scarlet fever 18 and diphtheria five in Milwaukee.

In 35 cities and towns of Massachusetts, with a population of 966,757 (population of the State 1,783,086), the total death-rate for the week was 19.79 against 21.58 and 19.84, for the previous two weeks.

In the 28 great towns of England and Wales, with an estimated population of 8,620,975, for the week ending January 6th, the death-rate was 21.8. Deaths reported 3598: acute diseases of the respiratory organs (London) 384, whooping-cough 94, scarlet fever 85, measles 82, fever 74, diarrhœa 43, diphtheria 30, small-pox (London five, Newcastle four, Oldham two) 11. The death-rates ranged from 15.2 in Halifax to 30.9 in Liverpool; Bristol 18.6; Newcastle-on-Tyne 19.2; Birmingham 19.9; London 20.5; Sheffield 22.2; Leeds 25.5; Sunderland 26.3; Blackburn 29.8. In Edinburgh 23.4; Glasgow 31.6; Dublin 31.9.

For the week ending December 23d, in 170 German cities and towns, with an estimated population of 8,455,290, the death-rate was 24. Deaths reported 3908: under five years of age 1727; consumption 598, lung diseases 495, diphtheria and croup 190, diarrhœal diseases 118, scarlet fever 81, typhoid fever 73, whooping-cough 51, measles and rötheln 49, small-pox (Breslau and Heilbronn one each) two, typhus fever (Breslau) one. The death-rates ranged from 44.3 in Chemnitz to 11.8 in Würzburg; Königsberg 29.1; Breslau 26.1; Munich 30.2; Dresden 21; Berlin 21.9; Leipzig 21; Hamburg 21.4; Cologne 22; Frankfort a. M. 16.3; Strasburg 25.3.

For the week ending December 30, in 170 German cities and towns, with an estimated population of 8,313,541, the death-rate was 25.1. Deaths reported 4005: under five years of age 1834; consumption 615, lung diseases 489, diphtheria and croup 205, scarlet fever 75, typhoid fever 51, whooping-cough 50, measles and rötheln 42, puerperal fever 16, small-pox (Königsberg, Elbing, and Heilbronn one each) three. The death-rates ranged from 12.5 in Kiel to 38.9 in Munich-Gladbach; Königsberg 33; Breslau 28.5; Munich 28.4; Dresden 23.1; Berlin 24.4; Leip-

zig 21; Hamburg 25.1; Cologne 28.7; Frankfort a. M. 19.7; Strasburg 24.4.

For the week ending December 30th, in the Swiss towns, population 494,390, there were 37 deaths from acute diseases of the respiratory organs, consumption 30, diarrhœal diseases eight, typhoid fever seven, diphtheria and croup five, measles four, whooping-cough two. The death-rates were, at Geneva 16.5; Zurich 14.2; Basle 18.7; Berne 19.6.

For the week ending January 6th, in the Swiss towns, population 494,390, there were 29 deaths from consumption, lung diseases 22, diarrhœal diseases 10, diphtheria and croup eight, typhoid fever four, scarlet fever one, puerperal fever one. The death-rates were, at Geneva 15.4; Zurich 16.4; Basle 15.9; Berne 28.2.

The meteorological record for the week ending January 20th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
January, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 14	29.916	33	44	18	100	65	75	80	SW	NW	W	6	19	12	R	C	C	—	—
Mon., 15	30.403	25	32	19	80	50	58	63	NW	W	W	10	12	8	C	C	C	—	—
Tues., 16	30.530	24	32	14	67	58	90	72	W	W	W	5	6	3	O	F	C	—	—
Wed., 17	30.105	28	35	17	70	94	89	84	W	E	NW	1	6	8	O	S	R	—	—
Thurs., 18	30.133	33	40	24	72	49	80	67	W	W	NW	16	18	12	F	C	C	—	—
Fri., 19	30.512	25	31	16	67	95	88	83	N	N	NW	11	4	5	F	S	O	—	—
Sat., 20	30.277	32	34	25	94	86	100	93	NW	E	E	3	8	20	G	O	R	—	—
Means, the week.	30.268	29						77										33.00	1.18

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 19, 1883, TO JANUARY 26, 1883.

HEIZMAN, CHARLES L., captain and assistant surgeon, will be relieved from duty in the Department of the Columbia, and ordered to report to the commanding general, Department of the South, for assignment to duty. Paragraph 10, S. O. 20, A. G. O., January 24, 1883.

KILBOURNE, H. S., captain and assistant surgeon. Leave of absence for one month, with permission to apply for an extension of two months, is granted. S. O. 218, Department of Dakota, December 21, 1882.

SKINNER, JOHN O., captain and assistant surgeon, will report in person, at the expiration of his present leave of absence, to the Surgeon-General for duty in his office. Paragraph 10, S. O. 20, A. G. O., January 24, 1883.

SPENCER, WILLIAM G., captain and assistant surgeon. The leave of absence on surgeon's certificate of disability, granted September 20, 1882, is extended three months on surgeon's certificate of disability. Paragraph 4, S. O. 16, A. G. O., January 19, 1883.

TAYLOR, MARCUS E., captain and assistant surgeon, will report in person, at the expiration of his present leave of absence, to the commanding general, Department of the East, for assignment to duty. Paragraph 10, S. O. 20, A. G. O., January 24, 1883.

WOOD, MARSHALL W., captain and assistant surgeon, will be relieved from duty in the Department of the East, at the expiration of his present leave of absence, and will report in person to the commanding general, Department of the Columbia, for assignment to duty. Paragraph 10, S. O. 20, A. G. O., January 24, 1883.

WYETH, M. C., first lieutenant and assistant surgeon, is relieved from duty at Fort Snelling, and will proceed to Fort Stevenson, D. T., and report to the commanding officer of that post for duty. Paragraph 1, S. O. 15, Department of Dakota, January 18, 1883.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, OCTOBER 1, 1882, TO DECEMBER 31, 1882.

BAILHACHE, P. H., surgeon. Present detail continued until further orders. October 6, 1882.

To proceed to Louisville, Ky., as inspector. October 13, 1882. Granted leave of absence for thirty days. November 10, 1882.

VANSANT, JOHN, surgeon. Granted leave of absence for twenty days. November 18, 1882.

HUTTON, W. H. H., surgeon. To proceed to Louisville, Ky., and assume charge of the service. October 7 and 14, 1882.

MILLER, T. W., surgeon. To continue at present station until further orders. October 6, 1882.

WYMAN, WALTER. To inspect keepers and crews of the Life Saving Service. October 5, 1882.

LONG, W. H., surgeon. To proceed to Detroit, Mich., and assume charge of the service. October 7 and 14, 1882.

MURRAY, R. D., surgeon. Having returned from service in the yellow fever epidemic in Texas, to report in person to the Surgeon-General, M. H. S. December 4, 1882.

Granted leave of absence until February 28, 1883. December 19, 1882.

FESSENDEN, C. S. D., surgeon. To proceed to St. Louis, Mo., and assume charge of the service. October 7, 1882.

PURVIANCE, GEORGE, surgeon. To inspect keepers and crews of the Life Saving Service. October 21, 1882.

SAWTELLE, H. W., surgeon. To proceed to New York, N. Y., and assume charge of the service. October 7, 1882.

AUSTIN, H. W., surgeon. To inspect keepers and crews of the Life Saving Service. October 5, 1882.

FISHER, J. C., passed assistant surgeon. Present detail continued until further orders. October 6, 1882.

To proceed to Alexandria, Va., as inspector. October 21, 1882.

THE SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY will meet at 19 Boylston Place, on Wednesday, February 7th, at 7.45 P. M. The following papers will be presented: Wound of Perinæum extending into Vagina, Compound Separation of Symphysis Pubis with Prolapse of Bladder; Recovery, Dr. C. D. Homans. Deep Abscess of the Thigh, Dr. D. W. Cheever. Dislocation of the Sternal Extremity of the Clavicle, with Dislocation of the first and second Costal Cartilages, Dr. A. N. Blodgett. Dr. W. J. Otis will show a New Tracheotomy Instrument. H. C. HAVEN, *Secretary.*

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the Society will be held at the Medical Library, 19 Boylston Place, on Monday, February 5, 1883, at eight o'clock P. M. Reader, Dr. Frederick C. Shattuck. Subject, Two Cases in Practice: (*a*) A Case of Fatal Obscure Nervous Disease. (*b*) A Case of Empyema evacuating itself through the Lung, with Subsequent Recovery. Dr. J. S. Greene will report a Case of Obscure and Rapidly Fatal Disease attended by Extensive Painful Tumefaction of the Skin. C. M. JONES, *Secretary.*

Lectures.

OPENING LECTURE ON DISEASES OF CHILDREN, AT THE POST-GRADUATE MEDICAL SCHOOL, NEW YORK.

BY MARY PUTNAM JACOBI, M. D.

DEFINITION. — At the outset of this course, which I am to have the honor of delivering to you, I deem it appropriate to define the circumstances which serve to specialize diseases of children in the wide field of human pathology.

Setting aside certain superficial practical considerations, we may come at once to the consideration which constitutes the basis of this specialization. It is the fact that the child represents an organism in a state of continuously progressive development. The details of this development may be classified into four groups, namely: —

(A.) Those concerning the adaptation of the organism to a succession of different media, and to a succession of changes in its relations to surrounding objects.

(B.) Those concerned in an increase of bulk.

(C.) In an elaboration of structure.

(D.) In an evolution of function.

Transition to Different Media. — The successive adaptations are necessitated by a series of transitions: —

(1.) From the placental to pulmonary respiration.

(2.) From vascular or imbibition nutrition to nutrition through processes of ingestion and digestion.

(3.) From the recumbent to the erect position.

(4.) From passive nervous and reflex muscular action to voluntary movement, mental action, and locomotion.

Rapidity of Change. — The rapidity and intensity of the changes through which the infantile organism passes both increase in proportion as we approach the birth point, and diminish as we recede from it. Thus the first hour, first day, first month, first year, may each be considered as distinct periods, covering changes of such magnitude as are effected in no other hour, day, month or year of existence. For in the first hour of the birth of the child, pulmonary respiration is established, involving a complete alteration of the intra-cardiac circulation together with extensive changes in that of the liver and entire abdomen. The arterial blood pressure becomes superior to the venous: the oxygenation of the blood passes from a minimum to a maximum; the functions of the heat-regulating apparatus, hitherto rendered unnecessary by a medium of constant temperature, are now initiated. During the first day the functions of the alimentary canal are established; the prehensile capacity of the mouth; primary digestion in the stomach and intestines; absorption and excretion. Extensive desquamation begins over the entire tegumentary surface, — in the alimentary canal of epithelium, on the skin of epidermis. This desquamation continues during several days of the first month, and accompanies the first effort of secreting activity on the part of the buccal, peptic, and intestinal glands on the inner, and of the sweat glands on the outer, tegument. The salivary and pancreatic glands do not elaborate effective secretions until after the close of the first month. During its first half, however, occurs the fall of the cord and healing of the umbilical wound; the adjustment of equilibrium in the hepatic circulation; the emptying the middle ear of accumulated epithelium, by successive efforts of deglutition; the habitual working of the heat regulating apparatus; the development of the psycho-motor centres in the brain. The latter, according to the experiments of Soltman, become for the first time responsive to faradic excitation on the tenth day after birth in puppies. It is probable with the much slower rate of development of the human young that in them these centres become excitable much later.

During the first year not only these but all the ganglionic centres in the cerebro-spinal axis become elaborated in structure. The special senses are trained, and the centres in which their nerves terminate become habituated to decompose the impressions these transmit to them. The power of voluntary movement is acquired; the growth of muscles, of the bony skeleton, and of the teeth in their alveolar cavities constitute prominent phenomena of the physiological life. The heart doubles in size (from a capacity of 20 cc. at birth to 40 cc.); the lungs treble themselves. (Beneke.)

The period of the child's life embraced between one and three years is marked by the completed eruption of the teeth; by change in diet, and hence in process of digestion; and by the further evolution of nerve centres connected with the acquisition of speech, the awakening of intelligence, and the attained ability for station and locomotion. The latter again implies continued progress in the development of the musculo-osseous system.

Between the age of three and seven years begin the social relations of the child; from seven to fourteen, and especially in the latter years of this period, the growth of the body, and particularly of some of its organs, becomes again extremely active, and preparation begins for the development and functions of the reproductive organs.

Correlative with each period thus demarkated, we find a preponderating liability to some special morbid condition. The correlation is rarely exclusive; few diseases are absolutely limited to any one period of life; but there are preponderances indicating an approximate limitation. An absolute limitation exists in regard to the morbid conditions associated with congenital malformations; and also in regard to the group of diseases known as those of the new born. The former are necessarily present at birth, and discoverable in the first hour of existence. The latter arise from possible accidents of parturition, or during the successive movements of transition effected during the first hour, day, or month. Thus, in the first hour we may encounter the formidable accidents of asphyxia, and arachnoid hæmorrhage, and the far lesser danger of subperiosteal cranial hæmorrhage constituting cephalatoma, — all dependent on abnormal pressure received by the child during the process of parturition. It is at the same moment that the fatal apnœa of diaphragmatic hernia is also, if ever, observed.

During the first day, or even the first two or three days, secondary morbid processes consecutive to an asphyxia or apoplexy of parturition are liable to appear. The infant whose respiration has been established after laborious efforts may develop pneumonia in consequence of intrauterine aspiration of foreign matters into the air passages. This is a "Schluck-Pneumonie," analogous to that caused by section of the vagi nerves, and paralysis of the glottis. A portion of the lungs may remain unexpanded in fœtal atelectasis, or subsequent portions may collapse from weakness of the inspiratory efforts. Such atelectasis is a not unfrequent

accompaniment of meningeal hæmorrhage. The latter again, initiated during the birth process, may continue to extend, not proving fatal till several days after birth. The cerebral hæmorrhage may of itself occasion no characteristic symptoms, but by extension along the medulla, or into the spinal membranes, may determine tetaniform convulsions.

Paralyses rarely or never arise from arachnoid hæmorrhage, but often coincide with them as a result of the same cause. The cadaver that I here show to you is that of a child who was found on the first day to be paralyzed in the right arm, and on the second day began to exhibit symptoms of arachnoid hæmorrhage over the left cerebral hemisphere. But the paralysis was due to compression of the right brachial plexus.

Meningeal hæmorrhage is not always the result of a parturient traumatism. It may be the expression of a puerperal infection; its symptoms so dominate the rest, that they are overlooked. Thus, the infective process tends, in the new born as elsewhere, to cause fever; but this tendency may be so checked by the hæmorrhage that the temperature falls even below normal.

Instead of paralysis from compression of nerves, the child may suffer fracture in one or more limbs. The baby I now show you was born with fracture of the right humerus, and also of the right femur. The mother was attended by a German midwife who summoned a physician, and both together applied some kind of splint to each injured limb. But the adjustment was so imperfect, that to-day, two weeks later, the fragments of the humerus are still freely movable on each other, and the fragments of the femur have united at an obtuse angle.

A prominent accident of the first day or days of infantile life is umbilical hæmorrhage. Certain English authors speak of this accident as one easily controlled. This is, however, only the case when it is dependent on a local process; but when, as is much more frequent, the hæmorrhage is the expression of constitutional disease, it is usually fatal. Under this microscope are slides representing sections from various tissues in such a case, where the hæmorrhage began two hours after birth, repeated itself frequently, and proved fatal in ten hours. It depended on a generalized fatty degeneration of the blood-vessels.

This fatty degeneration may begin in fœtal life, and be associated with acute fatty atrophy of the liver (Hecker and Buhl); or it may occur as an element of the complex process of the puerperal infection of the new born. This disease again may begin before birth, and even run its entire course in utero, the child being born dead with lesions of general peritonitis. After birth the same pyæmic process may be, now the cause, now the result of inflammations of the navel, or of the umbilical vessels.

Pyæmia and the acute fatty atrophy or Buhl's disease are both accompanied by severe icterus; a milder form of jaundice is extremely common during the first week of life, the well-known icterus neonatorum. The semiphysiological character of this symptom invests it with more interest than it could derive from its clinical importance. By some authorities it is considered only apparent, and to be dependent on the flushing of the skin during the process of the establishment of respiration, and the desquamation of the cuticle. By others again it is associated with the changes in the hepatic circulation. The tension is said to be so lowered in the hepatic veins, after closure of the umbilical vein, that bile passes freely into them from the biliary capillaries. Finally, the icterus has been attributed to destruction of the blood corpuscles, and this hypothesis again divides itself between two theories: according to the first, the destruction takes place within the blood-vessels at large, and the color of the skin depends on the accumulation of hæmatoidin, chemically identical with bilirubin. A much more tenable theory is based on the fact, recently demonstrated, that icterus is associated with an excess of the denutrition, — of the loss of weight, — normal to the first days of life, before the digestive processes are able to compensate the processes of waste. The blood corpuscles are attacked, in common with other albuminoid substances are destroyed in the liver, and their coloring matter occasions the formation of an excess of bile.

On escaping from the sphere of parturient accidents or diseases, and the time at which the various malformations may be properly studied, the child passes during the second half of the first month into a second region of liability, where disease depends on the imperfect function of organs. After the establishment of pulmonary respiration, the initiation of extra-uterine nutrition involves a series of processes, whose equilibrium is very easily overthrown. During the period of normal insufficiency of the digestion the metamorphosis of albuminoid substances — of which part is derived from the stored albumen of the tissues — is also incomplete. Hence, together with the formation of a large amount of urea, — also occurs the formation of an excess of uric acid. This may accumulate in the canaliculi of the kidney, constituting the renal infarctus of the new born; a lesion constantly discovered after death from malnutrition during the first weeks of life.[1]

A still greater degree of nutritive failure involves encroachment upon the fixed albumen of the tissues, and the child visibly emaciates. The imperfect digestion is indicated by acid fermentations of food, with consequent colic, vomiting, diarrhœa; or, as a result of the continued irritation of the digestive mucosa, catarrhal inflammation sets in. The growth of thrush (oidicum albicans) is facilitated by the desquamation of epithelium normal to the period. The ultimate result of these gastro-intestinal disorders, if unchecked, is a state of profound and pitiful denutrition, variously known as marasmus, atrophy, or athropsia.

The tendency to gastro-intestinal disease persists throughout the first year. A similar liability exists towards disease of the respiratory apparatus, and for the same reason in both, namely, the novelty of function. This contrasts with the immunity from disease of such organs as the heart, liver, and kidneys, whose functions have been exercised during several months of fœtal life. These organs seem to become liable to disease as they wear out from long use, not as they enter upon their functions.

During the first year two constitutional diseases first show themselves, hereditary syphilis in the first quarter, rachitis in the second quarter or half. Both depend on perversions of nutrition, — on the one hand, through the influence of a specific virus; on the other, through digestive failure and anæmia.

The three remaining periods of morbid liability can only be defined approximately. Thus, from the age of one to three, there is a greater tendency to certain

[1] Virchow supposed that the renal infarctus is normal to the new born. But this hypothesis has been rendered improbable.

forms of nervous disease. The maximum liability to meningitis is at two years. (Rilliet and Barthez.) Convulsions are associated both with processes of dentition (through the medium of a coexisting rachitis) and with digestive disorders, the latter frequent from the change of diet at weaning. The evolution of function in the nerve centres at this period of life constitutes a predisposition to nervous disorder. Scrofulous malnutrition, tuberculosis may be assigned to this same period, because, on the whole, it is then that they most frequently manifest themselves for the first time.

The fifth period, embracing the four years from three to seven, is especially characterized by the liability to infectious diseases, as diphtheria, the eruptive fevers, pertussis. This tendency is evidently associated with and partly caused by the widening social relations of the child, by which he is much more easily and frequently brought into contact with sources of infection.

Finally, the sixth period, extending from seven to fourteen, continues the morbid tendencies of the last two; shows a greater tendency to diseases of the osseous system; exhibits more distinctly the marks of constitutional anæmia, and develops the liabilities to rheumatism, and to certain neuroses, for example, chorea, epilepsy, hysteria.

(*To be continued.*)

Original Articles.

FRANKLINISM, OR ATMOSPHERIC ELECTRICITY, AS A REMEDY.[1]

BY A. C. GARRATT, M. D.

The old-fashioned friction electrical machine, consisting of a glass globe or cylinder, or later of a single glass plate, has recently been so wonderfully improved and enlarged as to be in practice a comparatively new apparatus; more powerful and efficient, more certain and uniform in action at all times, and affording a wider use of static electricity in medicine. The friction machine, as is well known, would not work in stormy weather, nor when the atmosphere was damp, humid, or *nil*, unless the room and machine were kept warm and dry by fire, and sometimes not then. When it did work it gave sparks of only one or two inches in length, at best. To make up for this it was formerly the practice to accumulate the electricity in Leyden jars, and then apply it by shocks. But all this is in the past.

The new large sized *static*-induction machine — I refer to the improved Holtz or Toepler-Holtz — is found to work at all times, in any weather, and with or without fire in the room. We can now at any moment get either a stream of fine little sparks that are numerous, rapid, and mild, or graduated stronger and longer sparks, from one to seven or even ten inches in length, repeated every few seconds or more often, for any length of time. Or they can be increased so as to resemble flashes of lightning attended with reports like those of a pistol. Yet this surprising power, made so manifest in this form from the machine, can be completely controlled and so as to be to the patient a comfortable, general electrization, formerly called *the electric air-bath*. Thus we can now apply long and heavy sparks, as in cramps, palsy, or anæsthesia; or sustain the patient enveloped from head to feet in an electrical potential, more or less high, for a longer or shorter time, as a general nerve tonic, and all the while as exhilarating and refreshing to the person as sunshine in winter, or a cool breeze in the heat of summer; and what is more important, the good effect of this is lasting. To imagine that this new machine, of seven glass plates twenty-five to thirty inches in diameter, is like the old friction machine, would be like comparing a powerful and beautiful steam engine to a tea-kettle.

With this immense advantage the medical use of atmospheric electricity is already revived with great success, in Germany, by Professor Clemens, and others; in Austria, by Professor Scwauda; and in France, by Professor Charcot, especially at his clinic in Paris, where he is aided by Dr. Vigouroux. This static-induction apparatus of *many plates and large size* must hereafter hold a prominent place for providing this most natural form of electricity in all more complete and thoroughly efficient electro-therapeutics. Not by any means supplanting the invaluable primary or secondary apparatus, but supplementing them at office or in hospital, with a greater efficiency of medical electricity when thus in ample quantity, and possessed of the peculiar statical quality, such as those cannot provide. But I insist, it is only the *large*-sized machines that are uniformly able to fulfill satisfactory results, and these are expensive. A machine of this kind having only two plates, if of large diameter, will produce quite long but *thin* sparks of relatively high tension, while the addition to the machine of several more plates, of like diameter, will increase its ability to produce greater quantity of electricity, hence thicker sparks when required, and ability to charge and sustain the insulating chairs and table with a high potential in all kinds of weather, which is a point of first importance.

This "improved" Holtz machine is now not only being used in Paris and Berlin, in Vienna and London, but is already in use here in Boston, by myself; in New York, by W. J. Morton, Professor Hammond, and others; in Philadelphia, by Professors Blackwood and Bartholow, and is destined to be found hereafter, at least, in all large cities, medical centres, and in hospitals, in this country. The ordinary medium or smaller sizes and few plates of the Holtz, or Toepler-Holtz machines, have for some time been placed among the philosophical apparatus in many of our colleges. But are medical teachers and practitioners generally aware of the positively nerve correcting power of "static electricity," when provided, as now, in ample quantity, at all times, and yet under delicate and complete control for efficiency and absolute safety?

The name electricity, as it relates to therapeutics, has now become merely a generic or general term. We cannot but see the increasing necessity of more definitely designating its particular form or classification, and the precise mode of application in every case, whenever it is referred to in regard to treatment, as in reporting cases. It is not enough to state simply that electricity was applied. But who applied it, from what instrument or source, and how. These must appear, or the report is of no value. However, this paper is written not with the intention of covering this field, nor even any division of it, but to recall attention to its methodic use, and as an example of what has been and can be effected, often most promptly in some difficult cases, by means of this improved franklinism.

Although perfectly well known to many, we need to restate and familiarize the fact, that more than heretofore we are to recognize three distinct kinds of

[1] Read October 28th before the Suffolk District Medical Society.

electricity for remedial uses, provided from three principal sources, by three distinct classes of apparatus, each producing electricity with very different and important characteristics peculiar to itself, which can be again modified so as to produce certain effects that cannot be replaced by any other. For it is fundamental that though in its nature electricity is always the same, yet its effects and ultimate results are decidedly varied, according to its source, form, and method of application. Hereafter it may be convenient for us to recognize the following classes: —

First Class: "Static Electricity," the oldest form known, is derived from the atmosphere only, and when employed as a remedy is termed franklinism.

Second Class: "Galvanic Electricity," and the voltaic (for these two may here be reckoned together as the same, each being produced by chemical action, as from moist metal plates in the voltaic pile, or wet metal plates in the cell of the galvanic battery, it being of the same nature and producing the same effects under like conditions) is known as the "primary" current, whether it is employed as a constant, or continuous, or interrupted current, and as a remedy it is or should be invariably termed galvanism.

Third Class: "Induced Electricity," which embraces all those phases of the familiar "secondary," interrupted, and usually *to and fro currents;* induced and greatly increased in certain physiological effects by means of a helix or coils of wire, either from the primary current alone, or from the primary with magnetism, or from magnetism alone, and of late from the static, each of which should be exactly and invariably expressed, as either the static-induced, or as electro-magnetism, or as magneto-electricity, when produced by a revolving armature in the presence of a magnet; all or either of these as the *induced* or "secondary," and when employed as a remedy the general term is faradism.

It is in regard to the greatly improved apparatus of the first class only, and the excellent effects of the electricity it provides, that attracts our particular attention at this time. Having had considerable and diversified experience of late with static electricity from the improved Holtz machine, the writer is impressed more than ever with the great (and in many cases of a certain class of diseases the superior) merits of the *static* quality and quantity of electricity, because of the decidedly good and quick work it can do in many difficult cases; so that he wishes all physicians to realize its availability, efficiency, and usefulness.

Considering the present almost general indifference of the profession as a whole to the remedial value of the old form of "static electricity," it recalls the quite general apathy and actual disbelief in some quarters in regard to the safety and power of the primary current or galvanism as a remedy, at the time when the writer first called the attention of this Society to it in 1857, now some twenty-five years ago. We can here appreciate the feelings of my friend Dr. W. J. Morton, when he, fresh from Europe and clinical experience with the static form, first presented this subject before the Academy of Medicine in New York some time ago, and showing the greater facilities of the Holtz machine for providing medical electricity said, "It may at first sight appear an act of temerity to ask attention to a method of treatment now so antiquated. But if, from this point of view, any apology is needed, it is simply that the writer, after careful trials in his own practice of the medical merits of static electricity, feels a natural desire to have others realize its value. Believing, as I do, that in again giving it a trial we shall take a real advanced step in the cure of diseases, I have ventured to bring this subject before you at this time. The invention of Holtz began in 1865, and marked out for modern statical electricity in medicine the possibilities of a new career. In the Holtz machine we have the means capable of furnishing electricity of high tension and in great quantity. By means of the two condensers and the ability of increasing the number of glass wheels, both the tension and the quantity are within the control of the operator. It gives with ease an eight-inch spark and a great *quantity*. Its constructor is Andeiveau, of Paris, while to Dr. Vigouroux, of Professor Charcot's clinic, is due its present adaptation to medical use."

The first medical use of atmospheric electricity, after a time termed "static," dates back one hundred and fifty years. For a long time thereafter the term electricity or electrization covered the whole subject, for that in fact was the whole of it. During a whole generation men obtained electricity from one source only, by one kind of apparatus, and only employed it for remedial purposes, and that by one principal method of application, namely, the shock; sometimes, however, by sparks. The limited power of the friction apparatus no doubt led to that mode of use. For seventy years or more static electricity as a remedy flourished and grew into much favor and use, notwithstanding its capricious action in variable weather, and the crude and cruel method by shocks, as was then generally practiced in England, here, and throughout Europe, even from 1730 to 1800, when the galvanic current was discovered, and the voltaic pile was constructed. Within that first epoch, from 1742 to 1760, Dr. Benjamin Franklin not only experimented successfully to learn something of the nature of this newly developed force, but he also devoted much time to the treatment of many cases of rheumatism, neuralgia, cramps, pains, and palsy, at Philadelphia, and some of them with marked success, using, of course, static electricity, the only form then known. No doubt Dr. Franklin was the first medical electrician in America.

Early in this century, however, the frictional electric machine became gradually neglected or supplanted, for it certainly was much less in use by medical men, possibly from its inconvenience, and partly from the peculiar effects, physiological and remedial, of the galvanic current, obtained from the voltaic pile, or from the new compound battery cells. To my mind it was still more from the disgust physicians must have had for the increasing fashion of hawking about small electrical machines with ample chains and battery of Leyden jars to exhibit at public fairs, shows, or museums, and "shocking" men and women there in platoons and by wholesale to prevent or cure them of consumption, decrepitude, palsy, or rheumatism.

Some years after, in 1832, Faraday appeared with his new-found *induced*, interrupted current, obtained from the galvanic or primary current by induction. Then, soon after, came Dr. Charles Page, of this Commonwealth, with his very ingenious and portable arrangement of helix and cell and automatic vibrator, for providing physicians with this new form of electricity so admirably adapted to certain medical uses. Faraday at once named this the "secondary" current, in contra-distinction to the galvanic or "primary,"

which was its source. Still, in many countries the old static form continued somewhat in professional use even up to twenty-five years ago, if not later. While abroad in 1857 the writer found frictional electricity now and then resorted to in some certain cases by very eminent men in Edinburgh, Paris, and Berlin, in Marseilles and London, but nowhere in this country at that time could we learn that it was employed by any in the regular profession. Todd and Bowman were using it from a large machine in some cases at King's College Hospital, while Golding Bird, Sir William Gull, and Wilks quite frequently referred certain nervous cases to "the electrical room" of Guy's Hospital (which room was kept by a fire constantly warm and dry) for sparks to be given or drawn, or for general insulation and electrifying. At the same time Duchenne, of Boulogne, was demonstrating the superior usefulness of electro-magnetism, while Prof. Robert Remak was advocating at Berlin the surprising and superior remedial power of the primary current by direct applications, and by central galvanization, especially for profound nervous diseases of the head, or central ganglia.

Suffice it to say I was strongly impressed with the peculiar utility of all the three forms, especially the primary current from a compound battery, and the static from a friction machine; they as remedies were then to me new and unique. From what I there saw in the few selected cases of the marked good effects by the static form, I provided myself also with a first-class static machine, which has been more or less in use in my electrical rooms in this city almost to the present time, it being, no doubt, the most worked, exclusively for remedial uses, by a regular physician, of any apparatus of that sort in this country. After all, the friction machine, working only at times, was found to be quite limited in its range of usefulness, because it produced too little for the electric air bath, and we could not increase or accumulate it by Leyden jars for any practical purposes, as I had determined never to use it as a shock. For these and other reasons its occasional good effects could not be reported, nor could the method be recommended to the medical profession.

Notwithstanding, in my own experience during the many years, when other treatments were baffled, and only slight applications were required, positive sparks, an inch or two long, could be elicited from the prime conductor, or negative sparks from the rubber end, so making very efficient localized effects. The former succeeded admirably sometimes in cervical, occipital, and facial neuralgias, also for recurring pains along the back or about the thorax and heart. Recent experience with the Holtz machine while the patient is well insulated on the platform chair, and fully charged generally with positive electricity, the negative sparks being thoroughly *drawn*, proved it a rapid remedy often for chronic muscular, periosteal, or arthritic rheumatism, for cramps in the muscles of the limbs, or of the diaphragm or stomach, or cramps anywhere, especially if it is also directed to the cervical and dorsal spine, also for some of those obstinate "shoulder cases," lumbago, and sciatica, for soreness and stiffness in overworked or strained muscles. Fine positive sparks or electric spray can be directed to the closed eyelids in cases of pains in the eyeballs occurring in delicate persons when caused by fatigue of the ciliary muscles. Longer and stronger sparks are required in local palsy, writer's palsy or cramp, lead palsy, etc.

Does this appear difficult or unsafe? From much experience I am sure it is neither. For example, with the new apparatus and appliances we can give the spray or positive sparks to the temples or about the head for neuralgic headaches. As aid in the treatment of some cases of dim sight and partial amaurosis, as from chronic alcoholism or use of tobacco, or from over-use, the application needs to be reversed and increased, so as to *draw* less frequent and larger sparks from the closed eyes and about them, endeavoring all the while to hold or maintain the eyes, one at a time, in a high positive electrical saturation. This is important. It is accomplished by first placing the patient on the chair, and, while fully charged positively, bringing the gold-pointed electrode connected with the negative main conductor or grounding approximately near the eye, say within three or four inches at first, then as the patient gets used to it bring it nearer. Then replace it, if well borne, by a large ball electrode, with slower turning of the glass wheels, so near only as to allow few sparks, within the bounds of pain and flashes of light, at first, always beginning gently, never working here very painfully nor long, while carefully watching the effects. Repeat these sittings daily or once or twice a week, according to the after-effects brought about. Bearing in mind that though the whole person is enveloped in electricity, yet while the electrode, pointed or ball-shaped, is held near the eye, ear, throat, or any other point of the body, there is accumulated at that point a still higher potential of electricity in the tissues beneath the skin, but of the opposite quality; also that at each disruptive discharge, if of considerable strength, as for palsy of the limbs, the long sparks are believed to either penetrate to the periosteum of the bones, or by induction to disturb the electricity of the tissues to that depth, so producing a radical nutritive change. But to clearly understand this versatile power we are working with, and which is to be so important to physicians, we must further analyze and understand this beautiful apparatus known as the Holtz machine.

ERGOT AND RUPTURED UTERUS.[1]

BY E. M. BUCKINGHAM, M. D.

The patient, under middle age, had had five or six children, one of them still-born; and when first seen by me had been in labor twenty-four hours, under the care of an irregular practitioner. Pains began about eight in the evening and continued until eleven the next forenoon, when the membranes broke. There was no more pain for some four hours, in consequence of which she was given two teaspoons of ergot, — Squibb's fluid extract, I believe. Following this was severe pain, which lasted some time, and then suddenly ceased. This pain had been so severe as to be bitterly complained of several hours afterward.

Later an unsuccessful attempt had been made to deliver by forceps, the woman being very restless and tossing about the bed at the time.

The case was placed in my hands four hours after the administration of ergot.

Examination, both external and internal, caused no contraction and very little pain. The child was in the right occipito-cotyloid position, sutures and fontanelles

[1] Read before the Suffolk District Medical Society, December 11, 1882.

marked by the swelling of the scalp, the os uteri nearly dilated and soft. My finger returned bloody from the examination, and as I finished the patient vomited, immediately after which her pulse was 120, but strong.

It was now seven in the evening. She had had no food since morning, excepting a few spoonfuls of whiskey, and had a few short naps in the previous night. She was given a cupful of hot milk, most of which was retained, and was left to rest for an hour and a quarter, during which she was said to be quiet and with no return of pain.

At the end of that time she seemed to me in good condition, as indeed she did when I first saw her, and it was more than five hours since the ergot had been taken. She was etherized, the bladder emptied of a little bloody urine, and she was examined preparatory to using forceps; but as a hand and the pulseless cord had come down into the vagina I turned instead. Turning was done slowly, but with perfect ease until the head stuck behind the pubic arch. Several attempts were made to extricate, both by the hands alone and with forceps, but without success, until the woman suddenly collapsed. The pulse had been felt, and the countenance watched at intervals throughout, but I saw no warning until the accident happened. Ether, which was now removed, had at no time been given to snoring. She was covered, stimulated with heaters in the bed, and whiskey and laudanum injected subcutaneously, and rallied slightly, but for a short time only. While this rally, which was very slight, lasted, I sent for Dr. G. W. Gay, intending, if he agreed, to perforate the head, as the easiest thing for the mother, but she was dying when he arrived. Ether was injected subcutaneously without effect.

After death forceps were applied by Dr. Gay, and the head brought away by the use of great force. The placenta was removed, and we each felt a tear through the muscular wall of the uterus, to the right of the median line, and near where the placenta had been. This was large enough to insert the hand, and there was a smaller tear in the peritonæum behind it.

Rupture must have occurred either as a result of the forced pains caused by ergot, from the use of forceps, or from turning. I do not believe that it was done during turning, because the uterus was then lax, and there was no resistance until the head was under the pubic arch, and because the accident can be otherwise and I think better explained; neither do I think it was done by the manipulation of the previous attendant, for although trying to apply forceps with the patient tossing about the bed may be dangerous, yet this was after the occurrence of a pretty well recognized symptom of rupture, that is, very severe pain, pain that was complained of hours later by a woman who had borne several children, and which suddenly ceased.

Rupture of the uterus is treated of in most books on midwifery, and the reported cases are many; but reports in which the accident is due solely to the use of ergot are, for obvious reasons, rare. Murphy has collected ten cases of rupture due to ergot, beside one of ergot and a breech presentation, and one of ergot and a slightly deformed pelvis.

One of Collins's cases (Anna Woodward) appears due solely to violent pains, which were not, however, caused by ergot. The uterus ruptured in the sixth labor, she recovered and in the eighth had again very violent pains.

One would naturally suppose that so severe an accident would be followed by shock, sufficient to show that something was wrong; but in this case I was rather surprised that so long a labor, with little sleep and without food, should have left her in so good condition; and in the reported cases the shock seems to vary very much in degree and in length, or to be altogether absent.

I suppose that the emptying the uterus in this case either increased the tear or caused hæmorrhage into the peritonæum, either of which would explain the sudden failure.

RECENT PROGRESS IN DISEASES OF CHILDREN.

BY T. M. ROTCH, M. D.

ACUTE MILK POISONING.[1]

DR. E. F. BRUSH, physician to the New York Infant Asylum, appears to have had unusual opportunities for observing the effects of abnormal milk on infants, and his remarks on this subject are significant of how often the real cause of an infantile diarrhœa may be overlooked, and the facts which he brings forward are valuable in that they may direct the attention of the general practitioner to this class of cases, which presents a wide field for investigation.

Dr. Brush says: "Our cows are secreting milk abnormally, and I use the word 'secreting' in the sense we understand it physiologically. We keep up the activity of the mammary gland from parturition to parturition, this is through heat and pregnancy. This process being carried on through generations in the bovine race has resulted in the mammary becoming an excretory gland. When a milking cow eats food which would cause diarrhœa in other animals she simply gives more milk, and the bowels are seldom much disturbed, but the poison is conveyed to the infant. J. P. Norton, professor of scientific agriculture at Yale College, states 'that all the effects of poisoning may be produced by the milk without the cows being apparently affected by the pasture.' The conditions that render milk poisonous are: —

"First: Feeding. The sudden change from the dry food of winter to the full flush of grass, picking up green fruit, eating brewers' grains, which make the milk more albuminous, and therefore more prone to putrefaction with the increase of summer temperatures, eating poisonous weeds, and drinking poisonous stagnant waters.

"Second: Treatment. Dairy farmers endeavor to have their cows calve in the spring-time, when the grass is plentiful, because then the feeding is cheapest, and the amount of milk to be got is greater. Now, if a cow calves in May she is usually in heat again in forty days, this brings the period to the last of June or the beginning of July. If she were allowed to become pregnant then her calving time would occur too early next year to get the flush of milk at grass time. Consequently she is allowed to worry, and quite often excite, the whole herd. This condition affects milk so perniciously that cheese makers exclude it from the factory; the odor is sometimes perceptibly putrid, and almost always easy to detect when the milk is heated in a water bath. Again, the milk is affected when the cow takes the bull. I have found by observation of my own cows that the milk following the act is always decidedly acid. In the subsequent pregnancy there

[1] Medical Record, October 14, 1882.

can be no doubt that the nutritive quality of the milk is lowered. Last but not least in the treatment of milch cows as a cause of poisonous milk is the cruel abuse to which they are subjected.

"Third: Diseases which are too numerous to mention here in detail. I will here, however, record my observations on a very common disease in milch cows, common because it occurs frequently, and receives little or no treatment, and yet the milk thus affected finds its way to the market to convey poison to the children. Last winter I made an experiment on one of my own cows. I bruised one quarter of the udder, thus producing traumatic garget. This often occurs in pastures by the cow striking the udder against stumps, etc. I found the milk from the gland in the affected quarter for a number of days stringy and lumpy, but always alkaline. The milk from three unaffected quarters presented no abnormal appearance, but while the traumatic condition existed was always decidedly acid. When this condition had lasted for four days I gave to one of my own children, aged sixteen months, about four ounces of this acid, normal-appearing milk. This was at five o'clock in the evening. The child fell asleep, but was awakened in two hours, crying apparently with stomach-ache. She was kept awake until past midnight, and a large quantity of acid was voided per rectum. The next day the bowels were slightly disturbed."

Dr. Brush also cites cases where maltreatment of a bulling cow apparently so affected her milk as to cause serious symptoms of vomiting and diarrhœa; he also speaks of the cases of poisoning which arose in the Alleghany districts some years ago from the milk of cows where poisonous herbage was afterwards discovered in the pasture. The writer of this report saw, during the past summer, what he supposed to be a case of acute milk poisoning, though no analysis was made of the milk. The case was that of a strong, healthy boy, four years of age, who had for over a month been thriving on the milk of one cow, the cow having unusually good pasturage, and being under close supervision. The cow began to bull in the night, and on the following morning the child was seized, after drinking the morning's milk, with vomiting and diarrhœa, which immediately ceased when the milk was changed for a few days. No other cause for the attack could be discovered beyond some supposed chemical change in the milk, transient in character, and lasting while the cow was in heat.

THE RELATION OF THE RED AND WHITE CORPUSCLES IN INFANCY.[1]

Prof. R. Demme found that it was much more difficult to determine the amount of corpuscles, especially of white corpuscles, in infant's blood than in the blood of adults. This was because of the large quantity of free nuclei present, amounting in the blood of a child two to eight days old to from 350,000 to 420,000 in one kilogramme of blood. Beside this the blood of sucklings, toward the end of digestion, contains a great number of dust-like bodies, which render the serum cloudy, and which are in a sort of transformation condition to genuine red blood corpuscles, and are difficult to exclude from an enumeration. Demme's experiments have been carefully carried out, and give about the following results: —

For every one white corpuscle there are

	A	B
At the age of	12 to 72 hours,	135 red corpuscles.
At the age of	4 to 7 days,	157 red corpuscles.
At the age of	8 to 14 days,	165 red corpuscles.
At the age of	15 to 30 days,	173 red corpuscles.
At the age of	31 to 60 days,	180 red corpuscles.
At the age of	61 to 90 days,	185 red corpuscles.
At the age of	91 to 120 days,	191 red corpuscles.
At the age of	121 to 150 days,	210 red corpuscles.

The column under A is for cases nourished exclusively by the mother's breast, that under B for cases nourished by cow's milk. The counting was done two and a half to three hours after feeding.

To a given quantity of blood there are more white corpuscles in infancy than in adult life, and the absolute number of all blood corpuscles is greater in the first days of life than in adults, the blood also is richer in hæmoglobin, which, however, decreases after about two weeks. Demme also found between the fifteenth and twentieth days: —

Before the first meal . . .	1 white to 150 red corpuscles.
25 to 30 minutes after the first meal	1 white to 155 red corpuscles.
3 hours after the first meal . .	1 white to 145 red corpuscles.
25 to 30 minutes after the second meal	1 white to 100 red corpuscles.
3 hours after the second meal .	1 white to 142 red corpuscles.
25 to 30 minutes after the third meal	1 white to 92 red corpuscles.
3 hours after the third meal . .	1 white to 158 red corpuscles.

These relations were disturbed, and there was an increased proportion of white corpuscles, when there was indigestion or constitutional disease.

INCONTINENCE OF FÆCES.[2]

Dr. George B. Fowler reports the following two cases, interesting from the comparative rareness of the affection, and from the apparent speedy recovery under treatment. No 1, a boy of mushroom growth and hothouse culture, aged seven years, began before breakfast every day with an hour of Spanish, and until three P. M. was unceasingly occupied with French, German, music, and the ordinary school curriculum. This policy, initiated four years previously, the pressure being gradually increased, had been maintained almost without interruption. The child had consequently developed into a sort of loaded phonograph, capable of startling automatic expressions, which gave the ambitious father great hope and comfort, until finally the sphincter ani became affected. When this occurrence first took place the child was sharply reprimanded, but the accident repeating itself in the beginning two or three times weekly, and later about once a day, he was severely flogged on many occasions, deprived of liberty, luxuries, etc., yet without avail. Dr. Fowler failed to find any spinal lesion, and the rectum was to digital exploration perfectly normal. The sphincter was tight, grasped the finger with the usual firmness, and there were no sources of irritation about the anus. A cessation of the punishment and release from books was ordered, and ten drops of Squibb's fluid extract of ergot given three times daily, and in about three weeks the involuntary discharges became gradually less frequent, and finally ceased altogether. No. 2, a girl thirteen years old, had had incontinence of fæces from the time that she was an infant. When remonstrated with she would be deeply affected, and declare her inability either to explain or avoid the accident. Electricity had been applied, without effect, generally and locally. The patient was tall and slim, with a pale, expressionless countenance; the flesh was cool and flabby, the sclerotics pearly white, and her motions

[1] Jahrb. für Kinderh. American Journal of Obstetrics, October, 1882.

[2] American Journal of Obstetrics, October, 1882.

listless. Examination of the sphincter ani gave unmistakable evidence of relaxation of its fibres, for although to a casual observer the anal outlet was sufficiently closed, yet there was an absence of resistance easily distinguishable. Nothing else abnormal was noticed. Iron in various forms had been tried without benefit. A mixture of fluid extract of ergot, fifteen minims, tincture belladonna, five minims, strychnia, one hundredth grain, was given three times daily. At the end of a week she had had only two recurrences of her trouble, and within three weeks she was considered cured. She was then put upon citrate of iron and quinine, with marked benefit. Four months later, all treatment having in the mean time been suspended, the patient, within a week, lost her appetite, looked ill, and suffered twice from the old trouble. A suppository of ergotin, five grains, and cocoa butter, ten grains, was given night and morning, and the iron and quinine mixture renewed. Decided improvement was immediately manifest, and after a fortnight the bowel was under normal control. The suppositories were discontinued after the second week, and the tonic after a month. There has never been a return of the difficulty.

ASCITES IN CHILDHOOD.[1]

Dr. Seiler gives as his opinion that simple ascites in childhood, when tuberculosis is excluded, always depends on hepatitis syphilitica diffusa or circumscripta gummosa, even in cases where all other signs of a syphilitic disease are wanting. The cases so far as he knows are all to be placed in the category of hereditary syphilis, and are curable by mercury and iodine. The only other possibility which he acknowledges is that there may occur in childhood a curable idiopathic hypertrophic liver cirrhosis. Dr. Seiler is not able to bring anatomical proof of the correctness of his statement, but reports observations which may serve to illustrate it, in that the ascites disappeared under antisyphilitic treatment. The ascites may be due to local disease of the peritonæum or to circulatory disturbances in the portal system. Ascites as a consequence of chronic primary peritonitis is not a clinical certainty, though Henoch has claimed its existence in one case of traumatic origin. The existence of cirrhosis of the liver in childhood is also not proved, and its occurrence is doubtful; cases classed under this head all appear to depend upon syphilis, and, moreover, the diffuse syphilitic hepatitis and the hypertrophic stage of cirrhosis cannot with certainty be distinguished.

SYPHILITIC HEPATITIS IN CHILDREN.[2]

Dr. Hugo Engel reports the case of a girl ten years of age, who, from the symptoms before and their disappearance after syphilitic treatment, he supposed to be a case of retarded hereditary syphilis represented by a syphilitic hepatitis. He also speaks of another case occurring in a girl seven years of age. Both cases recovered entirely; the ascites, enlarged liver and spleen, and dyspeptic symptoms disappeared, and have not returned. Dr. Engel then discusses the pathology of the disease, and speaks of the difficulty of diagnosis in childhood, arising often from there being no history of syphilis which can be ascertained. Dr. Seiler considers the essential points in the diagnosis of syphilitic hepatitis in children: (1.) A history of the case like this, the child having been for some time occasionally unwell without any special known ailment. (2.) The peculiar color of the skin and the somewhat cachectic appearance of a child who otherwise seems to be in good health. (3.) Ascites with the following peculiarities: (*a.*) Its gradual development and the absence of any of the usual causes; no tubercular peritonitis, no cancer, etc. (*b.*) Absence of pain, almost no tenderness, and no hæmorrhage from either nose, stomach, or intestines. (*c.*) After paracentesis liver very much enlarged, smooth margin, and hypertrophied spleen. (4.) The accompanying dyspepsia, but entire absence of any other symptoms. (5.) The success of the antisyphilitic treatment, which, while it may do good in other cases, would never be so rapidly successful, and not go hand in hand with such apparent improvement of the general health of the child. (6.) The peculiar fact that all cases of diffused hepatitis due to hereditary syphilis so far reported happened in girls.

CEREBRAL SYMPTOMS PRODUCED BY ASCARIDES.[3]

Dr. D. Juan Samada reports[4] a case in which symptoms of acute meningitis were produced by the presence of a large number of ascarides lumbricoides. The patient was a boy about eight years old. His attack began with severe headache, attributed to a fall sustained a few days before. This was followed by photophobia, conjunctival injection, and later by profound coma. Constipation was present, and as a saline purgative did not produce an evacuation calomel and aloes were administered. This produced several evacuations, each containing about thirty ascarides. The head symptoms ceased from the moment the bowels were purged, as if by magic.

PERFORATION OF INTESTINE BY ASCARIDES.[5]

Dr. E. Monens reports the case of a girl thirteen and a half years old, intellectually badly developed, and an onanist, who suddenly sickened with symptoms of vomiting and pain in the abdomen, of such violent nature that she became mad and could not be examined. On the next day there was well-marked, diffuse peritonitis, and six days later she died. At the autopsy, besides a diffuse purulent peritonitis, there were found (still living) in the descending portion of the duodenum three large round worms. On the inner side of the intestine was a perforation six mm. long, the bloodless edges of which lay quite close upon each other. In the duodenum were four more worms. The deceased Professor Perlo declared this case to be one of ascarido-phagic perforation, the existence of which he had previously doubted, though Leuckart in his time acknowledged without hesitation the possibility of such intestinal perforation, and veterinary surgeons have made observations of cases which cannot be disputed.

URETHRAL CALCULUS.[6]

Dr. S. Trorzki reports the case of a urethral stone in a boy one month old. The infant was otherwise healthy, but from the eighth day on the mother noticed that he cried when attempting to pass water, and seemed to get along easier when the pelvis was

[1] Berlin. klin. W., 26. Amer. Jour. Obstet., October, 1882.
[2] American Journal of Obstetrics, January, 1883.
[3] London Medical Record, November 15, 1882.
[4] El Sentido Catolico en las Ciencias Medicas. September 22d.
[5] Deutsch. Archiv f. klin. Med., 27 B. American Journal of Obstetrics, January, 1883.
[6] Analecten of Jahrb. American Journal of Obstetrics, October, 1882.

elevated. At the end of the first month the difficulty increased, and raising the pelvis did no good. The author saw the infant after twenty-four hours' retention of urine, and found a swelling about the middle of the penis, evidently caused by a urethral calculus. By a milking movement it was pushed forward to the meatus; this was laid open and the stone removed. It was hard, yellowish brown, and weighed 0.25; it was eight mm. long and five broad, and gave the murexid reaction. After its removal the boy passed a glass of acid urine containing crystals of uric acid and urates. Judging from the size of the stone it must have been of intrauterine development. An uncle of the infant died of urolithiasis.

LEPTO-MENINGITIS INFANTUM.[1]

Dr. William Fraser reports the case of an infant fourteen months old, unusually well developed, and perfectly well until June, when he began to be irritable and to lose in weight; the bowels were regular, and when he was first seen in July his pulse 99.5° F., and he had no other symptoms beyond what would be expected from the condition of the gums, which were hot and tender. Three days later a convulsion occurred, and two days later hemiplegia of the left side; the pulse was then found to be 130, small and irregular, the temperature 101.5° F.; sensation was perfect on both sides. At midnight he began to be convulsed, and this continued with irregular intervals until the next morning; the entire voluntary muscular system was then found to be in a state of tonic spasm, the limbs were rigid, the thorax arched, and the head retracted on the trunk. This tonic spasm was interrupted at intervals of half an hour by a series of clonic seizures involving chiefly the extremities. While these continued the thumbs and fingers were bent into the palm, and the fore-arms flexed and extended upon the arms by short, rapid, rhythmical movements.

The inferior extremities were similarly affected, though in a minor degree; the movements extended also to the face, giving rise to hideous contortions. The respiration was irregular, but there was no lividity. Pulse 140; temperature 102° F. Three days later, the previous symptoms having in the mean time continued, there was a diminution in the convulsions, but consciousness was almost entirely abolished, and there was an increasing tendency to coma; the pupils were contracted, there was entire inability to swallow, and the infant gradually sank, and died at six P. M. The post mortem was made twenty-four hours after death. On opening the skull and reflecting the dura mater, the convolutions appeared flattened, as if they had been slightly compressed. The veins of the cerebral cortex were much engorged. The outer surface of the visceral layer of the arachnoid was smooth and dry, but at a spot the size of a half crown, situated about the middle of the ascending frontal and parietal convolutions of the left hemisphere, the pia mater was covered by a thin yellowish layer of lymph. During the removal of the brain several ounces of clear serous fluid escaped from the lateral ventricles. On section of the hemispheres the centrum semiovale did not present any unusual number of vascular points on either side, but the substance of both hemispheres, and especially that of the left, was very soft.

The optic thalamus and lenticular nucleus of the left hemisphere were so much softened as to be almost diffluent. The ependyma of the lateral ventricles was soft and uneven, and it appeared in parts to be covered by a layer of lymph, but the surrounding textures were so much softened that it was doubtful whether the layer consisted of lymph or of the smooth and softened ependyma. At the base of the brain a layer of lymph about one eighth of an inch in thickness was found in the interpeduncular space underneath the visceral layer of the arachnoid. The inner surface of the dura mater at the base of the skull was perfectly smooth and without a trace of opacity.

[1] Glasgow Medical Journal, November, 1882.

GASTRIC ULCER.[2]

Dr. Adof Wertheimber reports the case of an anæmic girl ten years of age, who, after for several weeks suffering from dyspeptic symptoms, was suddenly seized with pain in the epigastrium; the pain soon subsided, but a few hours later returned, and was accompanied by nausea and vomiting of about a coffee spoonful of bright red blood. Blood was also found mixed with the next discharge of fæces. Nothing abnormal could be found in the lungs. The hæmatemesis occurred every day, and sometimes oftener, for a week; the child then presenting the features of a typical case of gastric ulcer was placed on milk diet, and soon recovered entirely. The case is interesting on account of the age of the child. Widerhofer and Kundrat have, as the result of their investigations in this direction, come to the conclusion that the round ulcus ventriculi is very rare during the first ten years of life, while, on the contrary, hæmorrhagic infiltration of the gastric mucous membrane and the erosions which precede gastric ulcer are frequently found. Budd[3] and others have observed that the perforating gastric ulcer seldom occurs before the sixteenth year, one case only having been found, a girl fourteen and a half years of age. Rokitansky never met with it under the age of fourteen. Brinton speaks of two cases between the ages of one and ten years.

[2] Jahrb. f. Kinderh., xix. B., 1 Heft.

[3] On the Organic Diseases of the Stomach. London. 1855.

Hospital Practice and Clinical Memoranda.

WORCESTER CITY HOSPITAL.

SERVICE OF RUFUS WOODWARD, M. D.

REPORTED BY L. F. WOODWARD, M. D.

COMPOUND DISLOCATION OF THE HIP.

JOHN S., aged twelve, while playing on the railroad track, November 11th, was caught under the wheels of a moving freight car, and rolled over and over, the wheels not passing over his body, except that a toe on one foot was crushed.

He was moved immediately to the hospital, and the visiting surgeon, Dr. Rufus Woodward, sent for. His injuries were found to consist of simple fractures of the right humerus and the left femur, a crush of the great toe on the right foot, and a compound dislocation of the head of the right femur.

The compound opening was situated on the inner side of the thigh, about two and one half inches below the angle of the pubes, and was a longitudinal slit about two inches in length. The leg was abducted,

making an angle of nearly forty-five degrees with the body, and the foot was everted. The head of the bone, together with the great trochanter, projected completely through the opening for about four inches, and lay across the scrotum. Its point of exit was just anterior to the adductor longus muscle. The ligamentum teres was torn out from the head of the femur, leaving a depression in the cartilage. The muscular attachments were torn away from the great trochanter and upper part of the shaft, leaving the projecting portion entirely denuded. There was no fracture of either the femur or pelvis detected, and the great vessels were not injured. The hæmorrhage was slight, and the soft parts, about the thigh and hip, not extensively lacerated.

The patient was nearly pulseless when he arrived at the hospital, and no attempt at reduction was made before death. He lived about five hours, and died from shock. After death a prolonged attempt was made by manipulation, without success, the muscular attachments falling over the acetabulum, and so preventing the replacement.

On looking up the subject of compound dislocation of the hip I find that most of the authors either make no mention of it or else say that it cannot occur. Hamilton, in his work on Fractures and Dislocations, writes as follows: "Sir Astley Cooper says he had never seen a compound dislocation of the hip, and believed that it was rarely so dislocated. Mr. Bransby Cooper has, however, reported in detail a very interesting case of this accident, communicated to him by Dr. Walker, of Charlestown, Mass., in which reduction was accomplished by Dr. William Ingalls, by manipulation alone, on the second day. The patient lived three weeks."[1]

As far as I am able to learn the above case is the only one heretofore reported.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

OBSTETRIC AND GYNÆCOLOGICAL SECTION.

J. B. SWIFT, M. D., SECRETARY.

NOVEMBER 11, 1882. DR. E. M. BUCKINGHAM read a paper entitled —

ERGOT AND RUPTURED UTERUS.[2]

At the conclusion of the paper Dr. Buckingham said the amount of shock is very variable. Robert Lee reports a case in which the child escaped through the tear into the peritonæum, and was delivered by the feet. Ten hours after delivery there were no symptoms of rupture; pulse 70; vomiting and tenderness absent until peritonitis began on the third day. Hardy and McClintock report that a woman with rupture was driven to the hospital, and, leaning on two other women, walked from the carriage up two flights of stairs to the ward.

DR. CHENERY asked the proportion of cases of ruptured uterus which proved fatal.

DR. BUCKINGHAM could not give the statistics, but thought it a very fatal accident.

DR. SHERMAN asked if the diagnosis of rupture could have been made when the patient was first seen, and if so what would have been the treatment.

DR. BUCKINGHAM said he did not see how the diagnosis could have been made, the woman apparently being in good condition, and no history of collapse having been obtained, but it merely being known that after having had these severe pains suddenly there was an entire cessation of all pain. But should he have another case with such symptoms, after ergot having been given, he should certainly suspect a rupture. Collapse does not always exist. The treatment would be to empty the uterus as soon as possible.

DR. COBB asked if the child was dead when the patient was first seen.

DR. BUCKINGHAM replied that he could not say positively, although he thought so. He could not hear the fœtal heart. When he turned the child, it was certainly dead.

DR. C. P. STRONG asked if the uterus contracted after the child was delivered.

DR. BUCKINGHAM replied that it did not.

DR. MCCOLLOM said that in the cases of ruptured uterus which had not proved fatal contraction had taken place, and this was the reason for the cure, as the contraction prevented hæmorrhage.

DR. STRONG thought it was curious that in this case, if the uterus did not contract, that there was no hæmorrhage into the peritoneal cavity.

DR. HARLOW spoke of a case he had seen. The woman had been in labor some time under the care of a midwife. He could not say certainly that ergot had been given, but thought it probable. Similar symptoms to those of the case reported came on, and he was sent for. On examination found that the uterus was ruptured, but the woman being in a state of collapse, and evidently dying, no attempt at delivery was made. The autopsy showed the uterus lacerated from the fundus entirely through the os. There was not much hæmorrhage, but the patient was collapsed when first seen.

DR. CHENERY spoke of a case which he had seen where the attending physician, in order to hasten delivery, had given a large dose of ergot, which produced most violent cramps, putting the woman into such agony that a large dose of morphia was required to relieve her, and which probably was the best thing that could have been given. The pains having ceased, and showing no signs of returning, he had been sent for to apply forceps. On examination he found an entire absence of pains, the os only dilated to the size of a silver quarter. It was a long time before the pains returned, and then they were too feeble to accomplish delivery, so that it was effected almost entirely by the voluntary muscles and pressure from above.

DR. LYMAN said the practical point to be brought out was as to the advisability of administering ergot during labor, and called for the views and practice of the members.

DR. HARLOW said authorities differ as to its use, some saying that the contractions caused thereby could not rupture the uterus. He had used it in some tedious cases in the beginning of his practice, but now does not do so, using the forceps instead where interference or aid is needed. Thinks it might be of service if it overcame the obstacle, but if it failed to do this it would kill the child.

DR. MCCOLLOM said he never gave ergot until after

[1] Vide Dislocations and Fractures of the Joints, by Sir Astley Cooper. Edited by Bransby Cooper. Edition of 1844. Page 80

[2] See page 125 of this number of the JOURNAL.

the birth of the placenta. Thinks it causes spasm of the uterus, and so prevents the very thing desired. Given after the birth of the placenta it prevents after-pains by preventing hæmorrhage, which is the cause of the pains. Has seen a very extensive laceration of the perinæum caused by ergot given by a medical student, the child, placenta, and membranes being forced out all together by one pain.

Dr. Buckingham said the uterus can be ruptured by the natural contractions where there is obstruction, so if ergot intensifies these contractions, would think that ergot would cause rupture all the more. Murphy reports ten cases without obstruction.

Dr. Lyman said the weight of testimony was all against the use of ergot until after the placenta had been delivered. Now that there were better ways of controlling labor, ergot had fallen into disuse. A number of years ago McClintock and Hardy, of Dublin, had shown that ergot endangered the life of the child, and no one since then had successfully contradicted this. Death was supposed to be caused in two ways: (1) by a direct poisonous influence, and (2) by compression. Formerly it was his custom to give ergot, the cervix being dilated or dilatable, in order to hasten the delivery, but now he was afraid to use it before delivery of the placenta. He has certainly had cases where the placenta remained a long time owing to the use of ergot. He agrees with Dr. McCollom in thinking that ergot given after the birth of the placenta diminishes the after-pains. It is his routine custom in all cases, primiparæ as well as multiparæ, to give a drachm of Squibb's fluid extract of ergot after the placenta is born, seeing first that the uterus is emptied of clots. He gives it for two reasons: (1) to prevent after-pains, and (2) as a prophylactic against possible post-partum hæmorrhage.

Dr. W. A. Dunn said he had had considerable experience in the use of ergot, having given it in about one hundred cases out of six hundred, when the os was well dilated, in multiparæ, and the head was resting in the inferior strait. He thought it caused the death of the child by causing the uterus to contract on the placenta so as to cut off the circulation. Has seen most intense cyanosis in the child follow its use. Now he seldom gives it until after the birth of the placenta. In a very rapid delivery where he fears hæmorrhage he gives it before the placenta is born. Never had a placenta retained more than twenty minutes. He thinks that the teaching of ten years ago was not so pronounced against the use of ergot as it is to-day. He was under the impression that formerly the older physicians were rather more disposed to hasten the labor by a dose of ergot. At the present time the student is most emphatically warned not to give ergot until the uterus is empty.

Dr. McDonough asked if it would be possible by a microscopical examination to tell whether or not the uterus had been ruptured by external violence, and spoke of a medico-legal case in which it had been claimed that this could be done.

Dr. Cobb, referring to retained placenta, said he had seen the placenta retained from half to three quarters of an hour, although compression had been employed all the time.

Dr. Swift spoke of the custom in Paris, at the Clinique d'Accouchement, of leaving the placenta entirely alone. He had seen one hundred cases there where nothing was done to help its expulsion, not even following down the uterus during the labor. When the child was born the cord was cut, and the child removed to be weighed, measured, etc. During this time the mother was left alone, and by the time they had finished with the child the placenta was found in the bed. Ergot was never given either before or after the delivery unless there was too much flowing.

Dr Lyman said, speaking of after-pains, that he had seen them caused by a clot in the vagina. He had a patient who had a very long perinæum. She had never had a child, and the fourchette came well forward, making a pouch in the vagina. She has a small fibroid, and at her menstrual periods, two or three days before the flow begins, there is an oozing, and a clot the size of a pigeon's egg forms. Until this comes away she has pains resembling after-pains. Has seen the placenta forced out of the vagina by the contractions, and considers these caused by the reflex action due to the irritation in the vagina.

Dr. McCollom has known clots in the vagina to cause after-pains, which were relieved by removing the clots.

Dr. Sherman asked if any other preparation of ergot besides the fluid extract had been used by any of the members.

Dr. Harlow said that formerly he used the powder, fifteen to twenty grains, in hot water, but it frequently caused vomiting. Then he used Squibb's fluid extract, and now uses ergotine pills, they being the most convenient form to carry.

Dr. J. N. Hall asked if it was common for the placenta to be retained in abortions at the third or fourth month, and in such cases what was the treatment.

Dr. Cobb said he had seen such a case where the placenta remained eight days, and then came away of itself.

Dr. Lyman said it was very common to have the placenta remain, and that was the great trouble in these cases. It was quite common practice, but an erroneous one, to give ergot in abortion, because it causes the uterus to contract about the placenta, and so prevents its coming away. He cited several cases where it had been given, and great trouble was experienced in removing the placenta afterwards. The thing to do was to clean out the uterus, and the hæmorrhage would stop.

Dr. Lyman thinks that ergot does not do any good in metrorrhagia. In menorrhagia it more often increases the trouble, as it also does in hæmorrhage from fibroids. The latter is much more often relieved by dilatation of the cervix.

Dr. Chenery spoke of a case where he found a fœtus, with the membranes and placenta, in the chamber vessel, but hæmorrhage continuing he examined the patient, and found another fœtus in the membranes hanging through the os into the vagina. In trying to draw this out it slipped back into the uterus out of his reach, so, thinking to force it out, he gave a dose of ergot, but instead of the fœtus coming the hæmorrhage stopped, and the woman went to full term.

Dr. Chenery asked what was the relation between early escape of the liquor amnii and a still-born infant. He had had a case where the liquor amnii escaped three or four days before delivery, so that the labor was what is known as a dry one. The child was still-born, and the placenta was only half the normal size. Did the absence of the liquor amnii allow the uterus

to contract so as to compress the placenta and shut off the circulation? If so, should anything be done in these cases?

DR. HARLOW said this same subject had been discussed some years ago, and the conclusion arrived at then was that no interference was necessary. A case had been reported at that time where the membranes ruptured a number of days before delivery, but the child was born alive.

DR. STRONG thought that the fœtal heart would be an indication as to interference.

DR. DUNN spoke of a case of imperforate anus with absence of the rectum, which he had had, where colotomy had been performed, and the child lived for fifteen days. A day or two after this case he had one of imperforate anus, the obstruction being only a slight septum, which was easily divided.

DR. HARLOW said he had had two cases of imperforate anus; both children died after being relieved for a time by an operation.

DR. R. B. DIXON presented a new perforator, a description of which was published in this JOURNAL, vol. cvii. p. 544.

NATIONAL ASSOCIATION FOR THE PROTECTION OF THE INSANE.

AN important meeting of the National Association for the Protection of the Insane and the Prevention of Insanity was held in Philadelphia January 25th and 26th. Three sessions were held at which the attendance was highly satisfactory as regards the size and character of the audience assembled, and the number and variety of papers presented, and the interest shown in the discussions. The Association held its meetings at the College of Physicians. Prof. S. D. Gross, on the first day, entertained the members at dinner.

DR. JOSEPH PARRISH, of Burlington, N. J., presided at the meeting.

PROFESSOR GROSS delivered an address of welcome, in which he called attention to some prevailing faults in the present methods of treatment of the insane, the need of better classification of cases under treatment, and the want of more intelligent study of the causes of insanity, especially in individual cases, in order to obtain a more rational treatment.

A paper on the

FUNCTIONS OF A MEDICAL STAFF OF AN INSANE HOSPITAL

was read by DR. TRAILL GREEN, of Easton, Pa., in which the author dwelt upon the insufficient provision for the increasing numbers of the insane, and insisted that a larger medical staff is required to properly provide for the insane than is usually found in the public institutions for their treatment.

On motion of PROFESSOR GROSS a resolution was passed recommending "the addition of a gynæcologist to the medical staff of every hospital for the insane, female practitioners preferred."

DR. CHARLES K. MILLS, of Philadelphia, read a paper on

THE DUTY OF MEDICAL COLLEGES AND THE GENERAL PRACTITIONER TOWARDS MENTAL AND NERVOUS DISEASES.

While increasing attention is paid to nervous diseases, and a better knowledge of neuro-pathology is provided by our medical schools, nowhere is there a thorough system of clinical teaching on insanity. He advocated larger asylums, and clinical lectures on this subject, attendance being made compulsory prior to graduation. The duty of medical colleges towards mental diseases is embodied in the single statement that the colleges are bound to give instruction equal in quantity and quality to that which is afforded in any well recognized special department of medicine.

On motion the secretary was directed to memorialize the medical schools throughout this country upon the necessity of establishing lectureships upon mental disease.

DR. JOSEPH PARRISH read a communication entitled

HOW TO PROTECT THE INSANE.

Speaking of the importance of the subject he said: If there is one subject before the people of this generation about which there is much felt and feared, and about which there is but little known and understood, that subject is insanity. We are told by eminent alienists and statisticians that the disorder is on the increase. Asylum reports and eminent authors in this sphere of professional service inform us that, with the increase of insanity, which is said to be out of all reasonable proportion to the increase of population, there is a striking decrease in the rate of cures. Insanity is permitted to hold the preëminence in defying all means that have been so far tried to render it amenable to remedies. The essayist referred to county poor-houses, but a few hours distant, where scenes might be witnessed of insane fellow-beings, without the ordinary comforts and attentions that are bestowed upon the meanest of men whose reason has not been dethroned.

Referring to the assumed incurability of the chronic insane, and the popular demand for a false economy in the conduct of public and especially pauper institutions, he said: Have we any right to say that chronic insanity is incurable? Have we any definite line by which we can differentiate between the chronic and acute? He believed the teaching of asylum officials in this regard might be reconsidered with advantage. We want no further necessity for writs of habeas corpus in order that a citizen may find his way from a hospital or asylum to his home. We want no more harsh mechanical restraints applied to the bodies of our fellow-men who are deprived of their reason. We want no more such false economy in the administration of county poor-houses as will confine a patient in a disgusting cell from one year to another rather than be at the cost of an attendant to walk or ride with him in the open air, or teach him some occupation. We want in every State of this Union an intelligent and faithful lunacy commission that shall have power under the seal of the Commonwealth to open every door behind which a lunatic sits, examine every case, hear every complaint, and act in harmony with medical superintendents and officers of such asylums so far as it may be possible to secure the largest freedom compatible with safety, and the highest intelligence in their management of the insane. We want intermediate homes, where nervous and disordered persons who are drifting toward insanity may place themselves.

The report of the secretary, MISS CHEVAILLIER, was then presented and referred to the Board of Council of the Association.

DR. DANA, of New York, offered a series of resolu-

tions relative to the death of Dr. George M. Beard, which were adopted by the Association.

In the evening REV. R. HEBER NEWTON, of New York, read a paper on the Obligations of the Sane towards the Insane, and DR. H. MARION SIMS presented an essay on the Prevention of Insanity in Certain Cases of Nervous and Hysterical Women. This class of cases are commonly curable, and the speaker urged moral treatment, and discouraged commitment to asylums without careful examination and study of the cases.

In the discussion of these papers it was distinctly stated that there is no desire on the part of the Association to antagonize superintendents of insane hospitals, and individual expressions of confidence in the officers of such institutions were made, but dissatisfaction was freely expressed with the present easy system of commitments to hospitals, and the want of proper supervision by the State authorities of these institutions

MR. CLARK BELL, President of the New York Medico-Legal Society, then read a paper on

THE LEGAL RIGHTS OF THE INSANE, AND THEIR ENFORCEMENT.

He referred to the army of one hundred thousand souls in the United States who were most defenseless, and in whose behalf he was appointed to speak. The act passed in England in August, 1845, may well be described as the Magna Charta of the liberties of the insane.

Mr. Bell then proceeded to give a statement of the legislation from time to time adopted in England in favor of the insane. He said there was no proper provision for the examination of the patients in the public and private asylums of New York. There is needed in that State a lunacy commission almost as large as that of England to do the work well. A superintendent of an asylum, under the laws of most of the States, is an absolute monarch. There never was a time when courts and juries engaged in the investigation of cases of alleged insanity should be more careful than at present.

A most important step is to secure as early as possible the appointment of a board of commissioners in lunacy, with compulsory visitation and examination of patients at least twice a year. It is also important that a constant supervision should be kept on the superintendents. It should be the duty of the State to provide separate receptacles for the incurable insane. Seclusion should be abolished as a punishment, and there should be, in fact, no punishment. The insane should be provided with employment and plenty of exercise in the open air.

On motion of DR. DANA, of New York, a committee of three was appointed to prepare and present a report on the proper law regarding the care of the insane; a committee of three on statistics to keep account of facts regarding the increase of insanity and the condition of the insane in the United States, to report at next meeting.

OFFICERS.

The following officers were elected to serve the ensuing year: President, Dr. Joseph Parrish, of Burlington, N. J.; Vice-Presidents, J. S. Jewell, M. D., Chicago, C. C. Yemans, M. D., Detroit, E. C. Seguin, M. D., New York, Mary Putnam Jacobi, M. D., New York, C. L. Dana, M. D., New York, and several others; Secretary and Treasurer, Miss A. A. Chevallier, of Boston; Executive Committee, the President, the Secretary, Dr. W. B. Atkinson, and Dr. C. K. Mills, of Philadelphia, Clark Bell, Esq., of New York.

SECOND DAY'S PROCEEDINGS.

The second day closed the proceedings with the morning session, at which several papers on the relationship of insanity to inebriety were read. A contribution, entitled, The Prevention of Insanity by the Rational Treatment of Inebriety, presented by Dr. T. D. Crothers, of Connecticut; and one on The Connection between Alcoholism and Insanity, by Dr. A. Baer, of Berlin, read by Dr. Carl Seiler, lead to a warm discussion upon intemperance and its causes. Dr. J. Milner Fothergill, of London, sent a contribution, which was read, entitled, Do Perversions of Assimilation Play any Part in the Production of Insanity, in which a case was quoted where gout seemed to favor the development of chronic mania. Without asserting that insanity may depend upon the digestive organs, it was believed that mal-products of digestion may aid in the action of other causes of insanity. A paper on the Systematic Education of the Insane as a Means of Cure, by Dr. James Lalor, superintendent of the district asylum, Dublin, was read by Dr. Ulrich, of Chester, in which some forms of congenial occupation and more free association of patients were recommended, by which a great reduction in restraint can be obtained. Some of the Conditions of Life which Influence the Production of Insanity were considered in a paper sent from England by Dr. Charles Mercier, assistant superintendent of the Lunatic Hospital of the city of London. The principal causes assigned being sudden emotion causing mental shock, complexity or arduousness of occupation inducing mental strain; but precariousness of means of livelihood was considered one of the most potent causes.

RESOLUTIONS.

Resolutions were adopted recommending to the careful consideration of physicians and superintendents connected with institutions for the treatment of mental diseases the value of regular and pleasant employment of their patients as a remedial agency.

That the report of the Medico-Legal Society presented by its President be accepted, and that the Association print an abstract of this valuable report in the journal of the Association.

That the Association recommend to the legislatures of the several States the adoption of a similar law to the one passed in Pennsylvania imposing penalties for false certificates of insanity.

— An affair unfortunate for the advocates of "co-education" in medicine has recently occurred at Kingston, Canada, which seems to have been precipitated by the women themselves. It seems that there have been mixed medical classes, and recently the ladies took offense at a remark made by the professor of physiology, and left the theatre in a body. Thereupon the male students petitioned the Faculty to dismiss the ladies, and even went so far as to threaten to leave the school themselves if their request were not complied with. A compromise was agreed upon: the ladies now attending classes will be permitted to finish their course, but no more will be allowed to enter, and for the future the medical school will be for men only.

Recent Literature.

Legal Medicine. By CHARLES MEYMOTT TIDY, M. B., F. C. S., Professor of Chemistry and of Forensic Medicine and Public Health at the London Hospital, etc. Part I. Pages xxx., 633. American edition. Henry C. Lea's Sons. 1883.

The same. New York: William Wood & Co. "Library of Standard Medical Authors." 2 vols. 1882.

Taylor defines legal medicine as "the science which teaches the application of every branch of medical knowledge to the purposes of the law." The work, of which the first volume only is before us, is a good illustration of this far-reaching definition; in comprehensive scope, in variety of topics, in wealth of learning, it seems admirably fitted, if carried on successfully to the end, to fulfill its author's design to make it "a complete treatise on legal medicine." We have had nothing approaching it in plan and in elaboration since the well-known and voluminous work of Wharton and Stillé was issued, ten years ago, in its last edition. He whose inclinations or necessities lead him to assume the functions of a medical jurist, (and the necessities occur too often without the inclinations) wants a book, encyclopædic in character, in which he may be reasonably sure of finding medico-legal topics discussed with judicial fairness, with sufficient completeness, and with due attention to the most recent advances in medical science. Mr. Tidy's treatise bids fair to meet this need satisfactorily. In two particulars it is especially pleasing. One of these is the freedom of the text from the tedious discussion of purely legal points, the author's consistent purpose being to aid physicians in practicing legal medicine, rather than to aid lawyers in surmounting legal difficulties; in this regard the volume is in refreshing contrast with some of the standard text-books. And another excellent feature is the admirable manner in which illustrative cases are introduced, each chapter having an appendix of citations, carefully compiled from original sources. To these cases reference is made parenthetically in the text, and, as in Casper's great work, the author's observations on the subject under discussion do not suffer interruption, while repetitions growing out of the applicability of the same illustration to various themes are avoided. The fact that these very numerous illustrative cases are drawn from many sources and are not limited, as in Casper's hand-book, to the author's own experience, and the additional fact that they are brought down to a very recent date, give them, for purposes of reference, a very obvious value.

Every one of the twelve chapters of this first volume presents attractive material for critical analysis; but only the briefest outline of the author's treatment of his subject can be given.

The introductory section, devoted to a consideration of the general characters of forensic medicine, of the occasions calling for its practice, and of the behavior of the medical witness both in preparing his testimony and in presenting it in court, is the most readable of all in the book. The author here uses the familiar style of a teacher addressing his class, and whatever may be lost thereby in the way of conciseness is more than counterbalanced in attractiveness. The physician who strives to shape his conduct according to the rules and principles here enunciated will find his experience in the witness-box far more pleasant to recall than is commonly the case.

The second chapter is devoted to the signs of death, and to the phenomena and appearances resulting from the march of post-mortem changes in the human body. The topic of cadaveric rigidity is treated at considerable length. The author accepts the theory of Kühne, that rigor mortis is due to a coagulation of myosin in consequence of an accumulation of acid products in the muscles. That remarkable condition of the recently dead body called by some writers "instantaneous rigor," or "cadaveric spasm," is held by Tidy to be physiologically identical with rigor mortis, and not to be distinguished therefrom save in the element of time at which the rigidity occurs; he admits, however, the great assistance afforded by it in determining questions of real or simulated suicide.

The subject of personal identity in the living and in the dead is discussed in the third chapter, with special reference to questions of age, sex, stature, race, cicatrices, tattoo-marks, and other related topics. In connection with the measurement of the skeleton and its component parts, the tables of Orfila, now discredited by many authorities, are quoted, "chiefly for the purpose of showing that the medical jurist must not be too dogmatic on the relative length of bones." When describing the microscopic examination of human hairs in homicide cases, the author gives the following judicious counsel: "The observations, to be valuable, should be numerous. Correspondence, the result of a single observation, should not be deemed sufficient to prove identity. . . . In giving evidence, it will be safer to say that two hairs are similar than that they are identical." And in the same chapter, under the head of blood-stains, he remarks: "It would, in our judgment, be exceedingly unwise to hazard an opinion as to the source of a given specimen of blood, from the microscopic measurement of the disks." What would Mr. Tidy say to some of the expert testimony in this country in recent years, in the matter of human hairs and blood-stains in capital cases?

The fourth and fifth chapters give a classification of the various forms of sudden death, and a good description of the details of a medico-legal autopsy.

Under the topic "Sex," in the next chapter, hermaphrodism receives full attention. The author declares that the only reliable test of sex, in doubtful cases, is the character of the genital gland, the individual being female if the gland proves to be an ovary, and male if a testicle is demonstrated. It is plain that this test is of rather limited application during life, and that reliance must be had mainly on such functional phenomena as are observable after the age of puberty is reached — on menstruation, if the sex be female, and on seminal activity if the sex be male. The author properly defines true hermaphrodism as "the co-existence in a single individual of completely developed ovaries and testicles, or of one, at least, of each gland;" and he adds, "It is scarcely open to question that, in the strict sense, a true hermaphrodite has never existed, more especially if we regard as essential that the individual shall perform the functions of either sex indifferently and effect self-impregnation." To this statement, we believe that most medico-legal writers of the present day will assent.

The chapter on life insurance and survivorship requires no special comment. It is chiefly of interest to English readers.

The symptoms and post-mortem appearances resulting from exposure to extreme cold and heat (including insolation), are fully described; so, too, are the medico-legal relations of burns and scalds. In connection with the latter subject, the author formulates some conclusions from his own experiments undertaken to define the means of distinguishing burns inflicted during life from those made on the dead body. The most important statement is this: "Given a blister containing a little thin, non-albuminous serum, without any red line surrounding the blister and without any injected condition of the cutis vera or subcutaneous tissues, the evidence is strong that the burn was inflicted after death."

Much of the chapter on combustibles and explosives seems rather out of place in a medico-legal treatise, a single topic only, that of the spontaneous combustion of the human body, being of immediate interest; and on this topic the author is brief, his principal proposition being that "there is no authentic case of true 'spontaneous' combustion of the human body on record," the alleged cases being instances of death by fire under peculiar circumstances.

The closing chapter treats of starvation, with an incidental study of food in its physiological and hygienic relations. The post mortem appearances in death by starvation are fully described with full reference to recorded cases. The author pays his respects to Dr. Tanner in a way not altogether complimentary to that gentleman.

This brief sketch of Mr. Tidy's work gives necessarily a very imperfect notion of its scope and its fullness of detail. The author has not contented himself with a repetition of time-honored medico-legal ideas in new phrases, but has been at once original and conservative, accepting that which experience has proved to be trustworthy, without giving the weight of authority to the obsolete on the one hand, or to the untried novelties on the other. The whole tone of the volume, indeed, has its key-note in the following sentence, taken from the preface: "For the medical jurist, whose object should be the interests of justice, to hesitate where science is positive, is as unjustifiable as for him to speak without reserve on those details of our science, where the limits of exact scientific knowledge are undefined. There is a scientific certainty which only a coward treats as uncertainty, and there is an uncertainty which only the boldness of ignorance ignores." If the author's plan is carried forward in the remaining volumes of the series with as much success as is auspiciously displayed in this initial work, he will place under great obligation all who are interested in legal medicine, and will illustrate a new departure in this field of medical science.

We must not omit to mention the fine manner in which English type and engraving skill have aided in introducing the author to his readers.

Address Delivered before the American Academy of Dental Science at their Fifteenth Annual Meeting. By FRANK ABBOTT, M. D.

This address is particularly interesting because the writer, although himself a teacher in a dental college, advocates a medical course as an essential in the education of a dentist. Viewing the subject historically, he shows that before the eighteenth century those who practiced upon the teeth were always physicians; but between this time and the establishment of the dental colleges the care of the teeth passed mainly into the hands of barbers and jewelers, who, although they improved the mechanical details, prevented dentistry from being recognized as a specialty in medicine. He justly states that until dentists again become physicians they cannot expect medical men to consider them upon the same plane as other medical specialists.

In commenting upon the statement of Mr. Eliot, that though a medical education was a desirable thing for the dentist, it required such extraordinary zeal in the student that few would pursue that excellent course, Dr. Abbott remarks that without this extraordinary zeal the student had better not enter the profession.

Briefly, Dr. Abbott's position is this: A three or four years' medical education, followed by a special course of two years or more in a dental college, should be required from dental students. R.

A Practical Treatise of the Diseases of the Uterus, Ovaries, and Fallopian Tubes. By A. COURTY. Translated from the Third Edition by AGNES M'LAREN, M. D., with a Preface by J. MATTHEWS DUNCAN, M. D. Philadelphia: P. Blakiston, Son & Co. 1883.

This work is a very welcome addition to our gynæcological literature, welcome both for its own inherent value and also as an exponent of the practice of what may be called the French school. While the rapid interchange of knowledge makes the medical world virtually one large school, yet different countries have nevertheless their own peculiar traditions and methods of practice.

Of the leading schools of medical thought it is safe to say that the American medical man is, as a rule, least acquainted with the French. This follows directly from the prominent place Germany holds in the scientific world as the source of the most profound and extensive research, and the consequent attraction it holds out to students.

But France, the country which first gave the impulse to modern gynæcological study, has by no means degenerated, and it is therefore with great pleasure that we find a representative book of this character placed within the reach of American physicians. The author, Dr. Courty, of Montpellier, is one of the most distinguished gynæcologists of France, and this book is the result of his large experience and ripe learning. The book does not attempt to cover the whole field of diseases of the female genital organs, but confines itself to affections of the uterus, ovaries, and Fallopian tubes. There is more in the original French edition, which has been omitted in the translation.

The contents are divided into two parts, preceded by an introductory chapter. The introduction is an exceedingly full and careful account of the anatomy, physiology, and teratology of the organs of generation, and well merits study. Its principal value consists in the fact that, being written by one who has had to make practical use of his anatomical knowledge of these parts in his surgical work, his descriptions are full of useful hints and suggestions about anatomical relations which we look for in vain in pure anatomies. To cite one instance: the author, after describing the different ligaments as means of suspension of the uterus, on pages 24 to 27 refers to their farther use as

regards the divisions which they establish in the pelvic cavity, and shows in a graphic manner how the broad ligaments, for instance, give the key to the differential diagnosis of hæmatocele, pelvic peritonitis, peri-uterine phlegmons, and various other conditions. The section on development and malformations is also very good.

Part I. treats of uterine diseases in general, and shows more than any part of the book the peculiarly large and comprehensive character of Dr. Courty's knowledge. It is manifestly the result, not of any one-sided study of uterine disease as an entity, or of a disposition to look at disease through the medium of his own specialty, but, on the contrary, there is throughout a recognition of the interdependence of local and general symptoms which should be the true aim of the specialist. He treats of the diagnosis of uterine diseases in general, then the presumptive signs indicating uterine disease, and, lastly, those furnished by direct examination. Then follows a full account of the various methods of treatment, constituting in itself a valuable treatise in minor gynæcology, and Part I. closes with some account of the general characteristics of uterine diseases.

Part II. treats of uterine diseases in detail, chapter 1 of functional disorders, chapter 2 of changes of position, chapter 3 morbid states without neoplasm, chapter 4 organic alterations, and chapter 5 diseases of the uterine appendages, with a short section on sterility.

The general impression which one gets from the perusal of this portion of the book is that the author relies more upon medical than surgical means in the treatment of the majority of the affections considered. Hence those chapters which treat of displacements and inflammatory conditions are the best. In other portions we too often find a series of methods of treatment proposed which at the best can be but palliative, and no mention made of simple radical operations. In some cases this is because the true nature of the lesion is not appreciated. For instance, when speaking of acquired hypertrophy of the neck in chapter 3, he gives a description and illustrates it by a plate which perfectly corresponds with what we know as laceration of the cervix, with eversion and hypertrophy of the lips, a condition for which Emmet's operation is the quickest and surest method of cure.

The chapter on displacements is full, and the author's views about pessaries and their indications are in general very satisfactory. We are pleased to see that he gives its proper significance to anteflexion of the neck, recognizing it as a result of faulty development, and the cause of dysmenorrhœa and sterility. He gives the usual unfavorable prognosis in cases of backward displacement with adhesions, and advocates the dangerous method of treatment by forcible reduction with the sound. He does not refer to the gradual method by packing the vagina, which in a large majority of cases will yield very satisfactory results.

The part of the third chapter which treats of granulations and ulcerations of the cervix lacks clearness. It illustrates in what direction Dr. Courty is wanting. With remarkable powers as a clinical observer which enable him to give graphic and clear descriptions of the appearances and symptoms of the various affections of the uterus and its appendages, he lacks precision in his pathology. The book, as a whole, is less satisfactory in this respect than in any other. For instance, he describes a "folliculitis or true acne of the cervix," which is nothing else than a lacerated cervix with great eversion and numerous retention cysts, the so-called ovula Nabothi. The cut accompanying the description is the most perfect representation of a stellate laceration of the cervix that could be wished for.

The chapter on cancer is good, and the operation for amputation of the cervix well described. We think the author's objections to the operation for removal of the whole organ should be modified in the light of the recent improvements in the methods and results achieved especially by the German surgeons.

It is impossible in the limits of a short review to criticise the book as fully as we would wish. Taken as a whole it is a valuable one, chiefly to the specialist. The student or the general practitioner can find others which would be more concise, and hence more available for reference. The translation seems to be very conscientiously done, and the illustrations are very very numerous and exceedingly well executed.

How we Ought to Live. A Practical Guide, written in plain, intelligible Language, for the Preservation of Health and the Attainment of Longevity; designed to enable All so to Live that they may reach Old Age in Health and Comfort. By JOSEPH F. EDWARDS, A. M., M. D., Author of How a Person threatened or afflicted with Bright's Disease Ought to Live, Dyspepsia, and How to Avoid it, etc. Philadelphia: H. C. Watts & Co. 1882. 636 pages.

The scope and aim of this book are sufficiently indicated by its title-page. In some twenty chapters the author discusses, in a style adapted to the popular mind to which it is addressed, the principles of healthful living. The field which he proposes to himself is a wide one, and includes the hygiene of the domicile as well as of the person. Ventilation and drainage, work, food, exercise, bathing, sleep, dress, are all considered in much detail, and the author adds specific directions as to the proper way to live under various peculiar circumstances, as pregnancy, nursing, consumption, heart disease, infancy, childhood, and old age.

The advice given is eminently sound, and but for the fact that it is not chiefly from lack of instruction that the public so generally transgress the laws of health, we should have greater confidence that this work would do much to promote longevity. The book contains a number of letters from old men, written in answer to inquiries by the author regarding personal habits and hereditary characteristics. We are somewhat amused to find among these a quotation from "a great poet-physician, now over seventy years of age, living in the neighborhood of our lamented Longfellow, . . . having an international reputation as a poet-physician and prose writer, etc.," who, the author, regrets to say, "refuses the use of his name."

Through the deep secrecy thus wrapped about the author's correspondent we almost thought we could penetrate, until we discovered that the latter was included among the *old men*, but now the mystery remains unsolved.

The book is well indexed, which will prove a convenience to the public who will use it.

— A female correspondent of *Harper's Bazar* is gravely assured by the editor, in the column of "answers to queries" of a late number, that it would be entirely proper for her to go into society after the birth of a still-born child.

Medical and Surgical Journal.

THURSDAY, FEBRUARY 8, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number: $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

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No. 4 PARK STREET, BOSTON, MASS.

SUBJECTS FOR MASTER'S DEGREE AT HARVARD, 1655–1791.

A FEW years ago a short paper on this subject was submitted at a meeting of the Massachusetts Historical Society by Mr. Edward J. Young, and was reprinted from the Proceedings of the Society.

As but few of our readers, probably, have seen this reprint, it may not be amiss to reproduce a few of the "questions," especially of those relating to science, to physiology, and medicine, as showing the then important and debatable subjects occupying men's minds. Some of them now seem, as our burning and unsettled questions may probably appear to our successors one hundred years hence, merely quaint and curious; some of them stand as milestones in the development and progress of theory and knowledge during the period referred to; one or two mark to our minds a juster sense of what is for the welfare of her citizens than prevails in Massachusetts at the present day.

These "questions" were discussed at Cambridge on the afternoon of Commencement Day, by candidates for the degree of Master of Arts, three years after their graduation, and were translated from the mediæval and modern Latin in which they were originally expressed, by Mr. Young. Among the candidates appear many names afterwards famous in the history of the country. The earliest programme which has been preserved bears the date of 1655, thirty-five years after the landing of the Pilgrims at Plymouth. In regard to the period, Mr. Young pertinently remarks: —

"Then the opinion was entertained that there really was a philosopher's stone, that it was possible to square the circle, and that the planets exerted an influence on terrestrial objects. Though astrology was on the wane, questions relating to divination were still debated, alchemy had not given place to chemistry, and modern science had not yet been born. Men argued whether the earth moved, and whether it was the centre of the universe. In medicine it was taught that a wound could be cured by dressing the implement that caused it. The Bible, literally interpreted, was the rule of faith in regard to all matters."

The question, Are the Americans Israelites? was answered negatively in 1699, and the question, Were the Aborigines of America descended from Abraham? affirmatively in 1773. This question again attracted considerable discussion, both in England and America, not long since. Was there a rainbow before the deluge? This was negatived in 1759, and affirmed in 1766. Did the reptiles of America originate from those that were preserved by Noah? Affirmed in 1769. Is a comet, which only appears after many years, more a foreboding of divine wrath than a planet which rises daily? Negatived in 1770. Can real gold be made by the art of chemistry? Affirmed in 1771. Is the sun inhabitable? Affirmed in 1772 by Theophilus Parsons, subsequently, from 1806 to 1813, Chief Justice of the Supreme Court of Massachusetts. Does the state of the atmosphere, whether salubrious or otherwise, depend to a great degree on subterranean effluviæ? Affirmed in 1768. Is the rarefaction of the atmosphere of comets, when they are nearest the sun, injurious to the birds which fly in it? Affirmed in 1772.

Among the questions relating to society and the State, one as to whether the advice of Paul to Timothy to "use a little wine" would bring him under the power of the tavern keepers was decided negatively in 1754.

Among the questions relating to physiology and medicine were the following: Is heat essential to fever? Does the liver make blood? Both answered in the negative in 1678. Is cold water the most efficacious of all means for removing fever? Affirmed in 1723. For a long time it was thought that the powder of sympathy of Sir Kenelm Digby would cure a wound by being applied to the weapon or instrument that produced it. The question, Is there a sympathetic powder? was answered affirmatively in 1703, 1708, and 1710; and the question, Is the cure of wounds by sympathetic powder lawful? affirmatively in 1693 and 1708. Is there a magnetic method of curing wounds? Affirmative answer in 1698. Is the inoculation of small-pox into human bodies lawful and safe? Affirmed in 1724, and in 1784. Are the natural capacities of men equal, and do they become different only in consequence of the different organs of their bodies? Negative answer in 1722; affirmative in 1741. Does the construction of the organs of the body make all the difference between an idiot and a wise man? Affirmed in 1773, and in 1786. Ought physicians to pray for the health of the people? Affirmed in 1724. Should the fees of physicians on the Lord's Day be counted as their own? Negatived in 1727. Affirmed in 1769. Do medicinal herbs operate by planetary power? Does the pressure of the atmosphere assist the contraction of the chest in the act of expiration? Both of these were answered negatively in 1728. Is there a duct which leads directly from the stomach to the urinary bladder? Negative answer in 1730, affirmative in 1731. Does the concurrence of the optic axes of both eyes of itself suffice to explain simple vision? Negative answer in 1749. Do all diseases arise from obstruction? Negative answer in 1762, by Joseph Warren, subsequently killed at the Battle of Bunker Hill. Did Adam have an umbilical cord? Answered in the negative in 1765, by Jeremy Belknap, subsequently an influential divine in Boston, and founder of the Historical Society, in 1791. Is an excess of eating and drinking sometimes beneficial to the human body? Affirmed in 1767. One of the

subjects proposed for the Boylston Prize Essay in 1882 was, The therapeutic value of food, administered against or beyond the patient's appetite or inclination. By some practitioners of the present day food is administered quite as heroically as were drugs by those of a previous generation. Is the cessation of breathing and of the pulsation of the arteries a sure sign of death? Negative answer in 1786. Did the art of medicine ever restore the health of a body when the healing power of nature could not renew it? Affirmed in 1788.

We close the extracts from these questions, of which many are now considered definitely settled, by two apparently farther from solution and less satisfactorily answered to-day in Massachusetts than they were one hundred and twenty-five years ago. The question, Should any one practice medicine before he has been approved by some competent persons? was answered in the negative in 1741; and the question, Is the toleration of quacks fatal to the people? in the affirmative in 1768.

To-day, in Massachusetts, quacks are fostered, and the State directly facilitates the conferring of medical degrees and the practice of medicine by any body of men, or any individual, however knavish or however ignorant. At the same time otherwise intelligent people are found who heedlessly stamp educated, honorable, responsible physicians as inhuman bigots, because they refuse to consult with every legally qualified practitioner.

NEW DEPARTURE IN THE BOSTON MEDICAL LIBRARY ASSOCIATION.

FOR some time past it has been urged upon the Executive Committee by members of this Library Association, that it would be a most desirable thing to add a circulating department to the library, and the following plan has been suggested and finally adopted by the committee: A certain number of new books, to be carefully selected and purchased, are to be loaned to members on these conditions: —

This volume is for home-reading, and may be kept by any member for a period not exceeding ten days, at the rate of five cents a day. If retained longer than the ten days allowed, the charge will be ten cents for each and every day thereafter. Every book must be entered on the librarian's book before being taken from the library.

There are now a small number of books ready for circulation, and the committee would be very glad to receive recommendations from the patrons to purchase particular books from time to time so that all tastes can be suited.

The endeavor will be made to select good standard books, which would have a general circulation, and a few that gentlemen would not care to buy for their own libraries, but would like to consult. It is justly thought that the establishment of this department will greatly add to the usefulness of the library, and that it will be so well patronized that it can be much enlarged, perhaps eventually be extended to the circulation of periodicals. It is intended that these books, after a certain period, shall be placed on the shelves of the general library. The advantages to those availing themselves of this department will be an opportunity, at a small expense, to read the latest work on any subject, and if any notes or memoranda are taken the reader may be sure of an opportunity to again consult the book. The Association, on the other hand, may profit by this plan of procuring new books, as it as yet has no endowment for this purpose, and hopes to gain enough from the fees to pay a part, at least, of the original cost.

To carry on the work the committee has appropriated a certain sum, and is guaranteed against any loss by a public-spirited and generous member of the Association. From the same gentleman a gift of a handsome Danner revolving bookcase has been received, which will hold three or four hundred volumes. With these facilities the library will doubtless be able to purchase and circulate all the new medical works as they appear, at least those in English.

AN ITALIAN HOSPITAL IN NEW YORK.

EVER since the death of Garibaldi the erection of some suitable memorial in his honor has been contemplated by the Italian citizens of New York. At first it was proposed to place a statue on the site of his former dwelling on Staten Island, but at the suggestion of the Chevalier G. F. Secchi de Casali, editor of *L'Eco d'Italia*, it has now been decided to found an Italian hospital in New York instead. The plans for the building, as drawn up by Mr. W. H. Wood, the architect, have already been accepted, and the work of erection will be begun as soon as a suitable site has been secured. When entirely completed, the hospital will have a front of one hundred feet and a depth of two hundred feet; but it is not proposed to put up such a large structure at first. The permanent front will be erected, and in the rear of it there will be temporary buildings which can be removed at any time that it is deemed advisable to complete the hospital according to the original design.

The building will be of Italian architecture, the front being of stone in two colors, and the rear and side walls of brick. A handsome colonnade will support the portico, and a bust or statue of Garibaldi will be placed in a niche above the entrance. For the interior trimmings the architect is at present experimenting with a new material designed to take the place of wood for inside work. It is made of clay rolled in sheets and mixed with sawdust. After being baked in a kiln the sheets can be nailed directly to the joists of the building, no laths or plaster being required. This material can be sawed and planed in the same way as wood, and is capable of being painted and decorated. It is thoroughly damp-proof as well as fireproof, and, in addition, has the great advantage of not absorbing disease germs. The cost of the hospital when completed is estimated at $100,000, but the buildings to be erected at first will cost only $15,000.

The general wards will accommodate about fifty beds, and there will be a few private rooms for pay-patients beside. The necessity for such an institution is shown by the fact that during the year 1882 no less

than twenty-five thousand Italian emigrants arrived in New York. Many poor Italians are now sent to the city hospitals, where it is difficult to treat them successfully on account of their inability to understand or speak English. A ball was recently given at Irving Hall in aid of the project, and in March or April a fair of Italian works of art will be held for it.

DR. JOHN BROWN'S LEISURE HOURS, THIRD SERIES.

Many men leave the practice of medicine, dropping out of the ranks at various stages of progress, to turn their attention to other fields, but comparatively few of these stragglers are called to a high place in the field of literature. These few, to whom medicine has been a means, not an end, as Dr. Brown says of Locke and Sydenham, show always in their writings the effect of their earlier study of mankind from the physician's stand-point. The doctor learns from the first, almost instinctively, to analyze the actions and motives of his patients, using the objective physical phenomena of their bodies as a check upon their subjective account of themselves, in order that, even though they deceive themselves, they may not deceive their medical adviser; he does this with something of the cunning of the detective but without the severity of a judge, simply in order that the truth may enable him to play, for the time being, the part of an honest friend and counselor. As a result, the doctor's estimate of humanity is probably at once the truest and the most charitable possible, and when he becomes a writer his knowledge of humanity forms a foundation upon which he builds as the sculptor uses his anatomical knowledge, making the fleshly covering which he imitates in marble conform to the lines of the bones and muscles which underlie and outline the whole.

The training of a physician can no more make an author than a knowledge of anatomy can make a sculptor, though the latter is an essential part of a sculptor's education, and the former adds to the writings of men fortunate enough to possess it a certain flavor, the charm of which is recognized by many beside their medical brethren. This charm is found to perfection in the writings of Dr. Holmes and Dr. John Brown (each of whom warmly admired the other), and the publication in America of the third series of Spare Hours is the occasion of these few remarks.

This volume contains the more purely professional papers originally published in the *Horæ Subsecivæ*, where many of us became familiar with them years ago. They were excluded from subsequent editions as too professional for general readers, — not medical enough for the doctors, and too medical for their patients, as the author himself says of them, — to be afterwards united in this single volume.

Not every one will agree with all he finds in these essays. Many will differ most emphatically from Dr. Brown in his ideas in regard to free competition in medicine, for instance; but all must feel that the ideas are those of a singularly honest man, whose views of life were the highest, and who was uninfluenced by any sordid motive.

In many portions of the volume the author dwells with emphasis upon medicine as an art. He has a way of considering the profession most decidedly as a means for the relief of suffering. The general tendency of his writings "being counteractive of the purely scientific and positive, or merely informative current of our day." Not that he undervalues in the least the scientific progress of the age. He is too much of an optimist to do so, but he evidently feels the loss to the student of the practical education gained under the old apprenticeship system, and desires to warn against the possible evils of the present system of teaching in classes. It is a desire to enhance the doctor's usefulness in his direct relations with suffering rather than to confine him to a narrower sphere, for few indeed can feel that they have done all that Dr. Brown advises the young doctor to do while waiting for his cases; for the man who has "fed, enlarged, and quickened his whole nature" in accordance with the doctor's prescription ought to be able to associate on terms of equality with heroes and demigods if not with the more select circle of Olympian deities.

The chief charm of the present volume lies in the history of medical men, some of whom would be unknown to us, on this side of the water, but for Dr. Brown's affectionate tribute.

The few words in regard to Dr. Adams, of Banchory, *doctissimus medicorum Britannorum*, the longer account of Dr. Marshall and his efforts in behalf of Military Hygiene, his loving tributes to Mr. Syme, present to us the striking points in their lives in a manner sure to enlist our sympathy and enhance our ideas of the possible grandeur of a physician's self-sacrificing life. Their characters are evidently drawn by the same pen that told the tale of Rab and Pet Marjorie, and one reason at least that the various individuals whose lives are given in this book are less famous than those two is simply that they were neither dogs nor little children, but only men.

These essays are marked by the same characteristics that made the better known writings so popular. They combine at once the flavor of the classics, the inspiration of devout religious feeling — something the same in kind, though as different as it is like, as inspired the literary achievements of Bunyan, — an intense human sympathy, rendered intelligent by a physician's training, with a good humor which sees the best in everything, and makes the most of it, while a sprinkling of broad Scotch adds a spice no other dialect affords.

MEDICAL NOTES.

— We have received from the Superintendent of Health of the city of Providence the returns of mortality for the year 1882. The deaths were 2242 as against 2145 the previous year. Diphtheria shows a reduction in its mortality from 116 in 1881 to 48. Typhoid fever, however, caused in 1882 141 deaths,

103 more than in 1881. This was, in fact, the most important disease of the year. It was epidemic for a few weeks after the 25th of October, and the number of deaths reported from it was 59 greater than was ever before reported in the city in any one year. There was no case of small-pox during the year 1882, and the last death in the city from this disease was in July, 1875; indeed, there has been only one death from small-pox in Providence since May, 1873, nearly ten years.

— A case has recently come under our observation of an elderly man who was etherized for the amputation of a toe, which had been crushed. On coming out from his anæsthesia he was observed to have left hemiplegia. He presents physical signs of mitral disease, though he never has had any cardiac symptoms, nor any other disease previous to his injury. In the two or three months which have elapsed the paralysis has not materially improved, and the limbs are now suffering from contraction.

— The daily press reports the arrest of a so-called "doctor" in Worcester for causing the death of a lady at West Boylston January 14th. He had been prescribing for her for bilious and typhoid fever without success. He then claimed that she was suffering from complaints incident to her sex, and treated her with kerosene oil, giving her three sweats, which raised all the skin on her body to a blister, and it came off on her back. She lived a week in terrible agony and died. An autopsy showed the cause of death to have been the application of kerosene, and the attendant was accordingly arrested on a charge of manslaughter.

NEW YORK.

— On the 10th of January a bill for the protection of alleged lunatics was brought before the Legislature by Mr. Hodges, of Brooklyn, some of the provisions of which are as follows: No person shall be incarcerated in any public or private asylum, or elsewhere, on the grounds of insanity, lunacy, or unsoundness of mind, until the fact of his insanity has been determined by a jury, upon a trial in a court of record. Violent lunatics may be confined temporarily in the manner now provided by law, until a trial can be had before a jury. Upon a petition setting forth the insanity of a person, accompanied by the affidavits of two reputable physicians, the judge of any court of record may order a trial to be held. The trial and other proceedings shall be conducted as in civil actions so far as applicable; except that the trial, when in readiness to proceed, shall be heard summarily, without reference to the calendar of the court. All fees and costs shall be paid by the petitioner, who shall be reimbursed out of the lunatic's estate, provided the fact of insanity be found. The punishment for securing the incarceration of a lunatic otherwise than according to the provisions of this act, to be a fine of $100, or imprisonment for not more than one year, or by both fine and imprisonment.

— At a meeting of the Medico-Legal Society, held January 24th, Dr. Edward C. Mann read a paper entitled A Plea for Lunacy Reform, in the course of which he said: "We have to-day the false principles that personal liberty is of little consequence, and that if a man or woman is insane, it is of itself a sufficient reason for confining them in a lunatic asylum. These false principles are implied in the statutes, they are acted upon, and judges even are misled by them. . . . When persons on this border-land of insanity have stepped over the debatable line, I think that the most deplorable results have often occurred when such cases have been confined in asylums, and that incurable insanity may have been the result of such a course on the part of friends. Persons are often admitted to asylums to save those who are dependent upon them from some annoyance, when they would have been more comfortable and would have had a better chance of recovery in their own homes." The commission of the Society in regard to the amending of the lunacy laws have submitted a report in which they recommend, among other points, that no person shall, as is now the custom, be committed to a lunatic asylum upon the simple certificate of two physicians under oath; that any physicians who give testimony for or against an alleged lunatic shall be experts on the subject of insanity; that all examiners in lunacy be selected by a competent tribunal; that legal provisions be made for allowing any person incarcerated in a private or public asylum to write to his friends or to his counsel, and that once in every six months an examination into the condition of the patients in asylums shall be made by competent experts.

— The Fire Commissioners have sent a letter to the chief engineer of the St. Louis Fire Department requesting that the instructor of the St. Louis Life-Saving Corps be permitted to come to New York and organize a similar corps among the firemen in the latter city. At the request of Commissioner Puzzey, the Board of Fire Commissioners recently decided to try the experiment of providing light scaling ladders, fire belts, life ropes, and other similar apparatus for the use of firemen. In using one of these scaling ladders, which are about twenty feet long, the fireman ascends from window to window of a burning building by fastening the hook with which it is provided in the sills. Around his waist he wears a wide canvas belt with a steel clasp in front of it, which he can fasten to a rung of the ladder, and thus have his hands free; and he also has around his neck a coil of rope, by means of which, having secured one end of it to any firm support, he can descend to the ground. A circular has been posted in all the company quarters inviting firemen who consider themselves physically qualified to volunteer as members of the proposed corps. The training school will be established at the new fire engine house in Ninety-seventh Street, near Tenth Avenue, and as rapidly as the volunteers become skilled in the use of the life-saving apparatus they will be assigned to hook and ladder companies.

— The twelfth annual dinner of the Alumni Association of the Medical Department of the University of the city of New York was held at Delmonico's on the 24th of January. Dr. T. R. Varick presided, and

addresses in response to various toasts were made by the Rev. Dr. John Hall, Dr. Alfred L. Loomis, Mr. Brennan, Commissioner of Charities, Noah Brooks, Esq., Rev. William M. Taylor, D. D., F. N. Bangs, Esq., President of the Bar Association, and Dr. A. A. Smith. At a business meeting before the dinner the following officers were elected: President, Dr. A. E. Macdonald; Vice-Presidents, Drs. W. A. Hammond, J. W. S. Greeley, W. E. Ford, S. J Clark, C. G. Jarvis, and G. J. Fisher; Treasurer, Dr. C. Dixon Varley; Secretary, Dr. F. R. S. Drake.

PHILADELPHIA.

— The meeting of the Association for the Protection of the Insane and the Prevention of Insanity was held in this city last week. A report of the proceedings appears in another column. One of the most important measures passed was the appointment of a committee to prepare a better title for the organization.

— The commissioners appointed by Governor Hoyt have prepared a bill for the protection of the insane, which will, in all probability, be presented at the present session of the Legislature. It provides for a control board, to be composed of the Board of Public Charities and three others, to be named by the Governor. It requires that all pay places where insane patients are treated shall take out license, under regulations prescribed by this committee, for the conduct and control of such establishments. The committee have power to enforce their regulations by suspending the license upon disregard of their rules, and such withdrawal of license lays the offending parties open to a charge of misdemeanor. The act also provides for the regular visitation of such institutions, and deals with the criminal insane, and provides that such persons, when pronounced cured, shall be turned over to a place of custody, and not discharged upon the community without legal release.

— The third annual meeting of the Philadelphia Academy of Surgery was held January 8, 1883, at which the President, Prof. S. D. Gross, occupied the chair. Dr. William Hunt, the orator of the occasion, took for his subject a review of the achievements of surgery for the past year, paying especial attention to Professor Esmarch and antisepsis. The communication of Esmarch upon the case of President Garfield was taken up and critically discussed. Notwithstanding the professor's statement that the gun-shot wound of the vertebra was not necessarily fatal, he said he had no hesitation in challenging him to produce a single human specimen illustrating recovery, from the dissecting rooms or museums of America or Europe. With regard to sepsis and wound infection, he considered that the poison was in the patient rather than in the atmosphere, and cited an instance in which he was himself rendered toxæmic by the fetid gas issuing from an abscess which he lanced. This instance was reported in the Pennsylvania Hospital Reports in 1868. He concluded that it was not what went into the man but what came out of it poisoned both patient and surgeon. In the details of the President's case he showed that some of the professor's premises were incorrect, and his conclusions hasty. In particular he ridiculed the idea of comparing the slight superficial wounds of the Emperor with a few bird shot with the mortal wound of the vertebra and splenic artery in the case of the late President. With reference to antisepsis, he compared micrococci to maggots, and said, "Having noticed wounds healing kindly under a mass of maggots, I reflected that they were scavengers, eating only dead material, and so converting harming matter into harmless living substance. We have to get rid of them, it is true, because they will *persist* in getting into *wrong* places, and so giving infinite amount of trouble." He asks, "Now are the micro-organisms, of which we hear so much, any more than consumers of dead material, serving a beneficent end so long as they do not get into *wrong* places? Molecular death is going on continually in all living tissues. In the nice balance of perfect health the results are removed so completely through the blood and lymph channels and by other means that there is no accumulation. When, however, disturbance arises, as inflammations, for example, from any cause, abundant necrotic products are the consequence, and these accumulate faster than they can be removed. Then come in the migrating micro-organisms. It is a question of food, and is consonant with what we know of the movements of hosts of higher animals and plants. What is of more importance is that these organisms get into *wrong* places, where, accumulating with great rapidity, they help to choke further and irritate what has already started on an evil course, and so they become secondary and very fruitful causes of disease. We may see from Formad's views how scrofulous subjects with narrow lymph channels are more readily affected than others. To my mind there is no positive proof as yet of the organisms being the specific and primary causes of disease."

After the lecture, which was attentively heard by a large audience of ladies and gentlemen, a reception was held in the Museum of the College of Physicians, and a fine microscopic exhibition held.

— At Dr. DaCosta's clinic a case was recently shown of a man who had taken six drachms of chloral within two hours, but who recovered after electricity, artificial respiration, and strychnia injections.

MEDICO-LEGAL NOTES.

THE PELTZER TRIAL.

The *London Medical Record* gives a résumé of the Peltzer trial, in which some interesting and important facts regarding the post-mortem evidence as to the cause of death in gun-shot wounds were brought out. The Peltzer brothers, Armand and Léon, were accused of the murder of M. Bernays, a well-known barrister of Antwerp, with whose wife Armand was suspected of a *liaison*. At the instigation of Armand, Léon, it is supposed, shot M. Bernays, who was unwittingly entering a room whither he had been enticed

for that purpose. The body was discovered eight days after death, sitting in an arm-chair, with no blood upon the clothes, but with a pool of some nine ounces upon the floor. The post mortem was made eleven days after the murder. At the trial, Stienon, the examiner, testified that the cause of death was a wound in the nape of the neck, which was perfectly clean, without any burn. The ball had gone through the neck from left to right, slightly ascending, and perforating the skull. The principal part of the projectile was found in the right temporal (middle) lobe of the brain. On the body were stains of blood and cadaveric lividities. The blood stains were in the nape of the neck and on the right side of the head. On the nostrils and moustache were streaks of blood. There were lividities on the right leg and fore-arm. No blood was found in the pharynx. The wound in the nape of the neck could not have bled much externally. The bleeding had been internal and through the nose. There was little blood on the clothes of the deceased. A spot on the carpet contained nine ounces of blood. There was a foot-print, as he alleged, in this spot, not produced by the deceased. Experiments made for the purpose showed that the foot-prints could not have been produced earlier than two hours and a half after the blood had flowed on to the carpet, and probably it was twenty to twenty-five hours afterwards. It was certain that the foot-print was not produced on January 18th, the day of the first investigation at the house, and eleven days after the death. Experiments showed that cadaveric lividities could no longer be displaced when the body had remained in the same position for twenty-eight or thirty hours; therefore the body could not have become cold in the same position as that in which it was found. It might have been moved after twenty-eight or thirty hours, but the cadaveric rigidity must be taken into consideration. The body must have been rigid after twenty-four hours. Destruction of this rigidity was possible only by tearing the muscles, and no muscles were torn; therefore it was probable that the moving of the body had been effected after cadaveric rigidity had disappeared, which would happen after sixty or seventy hours. It followed that the body must have been moved five days after the crime. The blood-clot on the carpet was irregular in shape, there being no blood in the centre, and the foot-print was at the side. Death had doubtless been instantaneous, and experiments showed that the shot had been fired at a distance of four inches from the wound, though there was no blackening. The clothes of the deceased were in perfect order, and there was no evidence of a struggle having taken place. Léon had indicated a spot where the shot was fired (in a quarrel, as he now claimed), but it was impossible that his victim could have been on that spot, as in that case the blood would have flowed all over his clothes, which was not the case. Bernays had evidently fallen against the corner of a writing table, as was indicated by a slight wound on the temple, and had then rolled on to the floor. Probably the deceased was shot whilst stooping his head, as many people do instinctively on entering a room. Inside on the door were some drops of blood, spurted on it when the wound was inflicted. The victim had bled through the nose for five or ten minutes after death. If the assassin had raised the head of Bernays, the blood would have flowed on to the clothes, which were free from blood. The foot-print on the blood-clot on the carpet had probably been made by a boot of Armand's, with which the mark corresponded. The body had not been moved sooner than from forty to sixty hours after death. This was the summary of Stienon's evidence, and he was confirmed by Vleminella.

The only points at variance with this testimony which were maintained by experts for the defense were that the impression on the blood upon the carpet had been made by a knee and not a boot, and that it might have been made in ten or fifteen minutes after the blood had flowed. Hence it might have been caused, as Léon stated, when he knelt to raise the head of the deceased to render him assistance. Cadaveric lividities, these witnesses testified, permitted no conclusions to be drawn twelve days after death, as they were then accompanied by putrefaction. The blood they believed to have flowed from the neck and not from the nose. The brothers Peltzer were both convicted.

Miscellany.

DR. GOODELL ON STERILITY AND PELVIC PERITONITIS.

IN a recent clinical lecture,[1] Dr. Goodell, speaking of a case of anteflexion with stenosis causing dysmenorrhœa and sterility, says: —

"From my observation I should say that marriage is poison to a woman unless she has children. Nature intended that the womb should by pregnancy have a respite from the monthly congestions of the menses. At the end of nine months the woman gives birth to a child and suckles it, and this also gives rest to the womb. If now there is a stenosis of the cervical canal, she cannot become pregnant; the congestion grows worse at each period, and finally becomes continuous and pathological. Marriage adds to this chronic condition the congestions resulting from the marital relations, as coition, etc., and things go on from bad to worse, until the woman may at last become a confirmed invalid."

His treatment of the stenosis was by rapid dilatation, which he strongly recommends as against a cutting operation. With the exception of two cases in which the os was torn (not, however, with any ill results), he has never had any accident in one hundred and thirty recorded cases of dilatation, while he lost a patient from the cutting operation, and believes that many women have died from that treatment.

Regarding a case of pelvic peritonitis with fixation, he remarks: —

"Fixation is not a good term; but, as I have not succeeded in coining a better word, I still use it. Some one has made the beautiful simile that the womb in its natural condition is like a ship riding at anchor which moves with every change in the current, and responds to every change in the direction of the wind;

[1] Philadelphia Medical Times, January 13.

so the womb, steadied loosely by its ligaments, responds to every movement of the body, — to every inspiration and expiration. It is needful that it should be so; for, if the womb were fixed, the male organ would during coition cause severe pain, and might indeed perforate the vagina, as has been recorded in one or two instances. A cold winter night comes, and the water in which the ship has been freely floating freezes, and the vessel no longer moves with the current. So it is with the womb."

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 27, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	636	215	16.17	17.27	5.65	3.14	—
Philadelphia	846,984	398	129	17.57	8 79	10.04	20.1	1.51
Brooklyn	566,689	241	98	18.67	22.40	10.79	3.73	—
Chicago	503,304	—	—	—	—	—	—	—
Boston	362,535	170	34	18.23	14.12	7.65	1.76	—
St. Louis	350,522	182	63	24.75	17.60	11.55	7.70	—
Baltimore	332,190	252	105	42.90	7.41	8.58	2.34	29.25
Cincinnati	255,708	108	34	27.34	16.50	5.50	1.83	—
New Orleans	216,140	116	27	28.38	9.46	1.72	2.58	11.18
District of Columbia	177,638	76	26	10.82	19.72	2.63	3.94	—
Pittsburg	156,381	61	—	26.24	11.84	4.92	2.28	1.64
Buffalo	155,137	66	26	22.80	7.60	9.12	4.56	—
Milwaukee	115,578	45	23	13.33	15.55	4.44	6.66	—
Providence	104,857	48	12	14.58	20.83	4.16	—	—
New Haven	62,882	31	6	17.13	9.66	6.45	3.22	—
Charleston	49,999	37	12	—	13.50	—	—	—
Nashville	43,461	18	4	27.77	5.55	5.55	—	11.11
Lowell	59,485	32	9	—	3.12	—	—	—
Worcester	58,295	16	6	—	30.25	—	—	—
Cambridge	52,740	20	8	30.00	15.00	30.00	—	—
Fall River	49,006	14	3	21.43	14.28	—	7.14	—
Lawrence	39,178	13	6	23 07	—	15.38	—	—
Lynn	38,284	12	2	8.33	24.99	8.33	—	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	6	1	16.66	—	16.66	—	—
New Bedford	26,875	—	—	—	—	—	—	—
Somerville	24,985	—	—	—	—	—	—	—
Holyoke	21,851	12	3	33.33	8.33	8.33	—	—
Chelsea	21,785	12	6	8.33	24.99	—	—	—
Taunton	21,213	9	1	22.22	22.22	11.11	—	—
Gloucester	19,329	7	0	—	—	—	—	—
Haverhill	18,475	—	—	—	—	—	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	4	0	25.00	25.00	25.00	—	—
Newburyport	13,537	8	2	—	12.50	—	—	—
Fitchburg	12,405	4	0	—	—	—	—	—
Malden	12,017	8	0	25.00	25.00	12.50	—	—
Twenty-three Massachusetts towns.	172,423	43	14	13.95	16.27	4.65	—	—

Deaths reported 2705 (no report from Chicago): under five years of age 785: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 549, consumption 407, lung diseases 388, diphtheria and croup 201, small-pox 97, scarlet fever 76, typhoid fever 49, diarrhœal diseases 27, measles 23, cerebro-spinal meningitis 18, whooping-cough 18, erysipelas 18, malarial fevers 16, puerperal fever eight. From *typhoid fever*, Philadelphia 10, Pittsburg nine, New York five, Boston, District of Columbia, and Providence three each, St. Louis, Baltimore, Cincinnati, New Orleans, and Buffalo two each, Brooklyn, Lowell, Fall River, Lawrence, Holyoke, and Malden one each. From *diarrhœal diseases*, New York nine, New Orleans eight, Boston four, Baltimore two, Brooklyn, Cincinnati, Nashville, and Marblehead one each. From *measles*, New York 14, Cincinnati four, Brooklyn, Boston, New Haven, Holyoke, and Brookline one each. From *cerebro-spinal meningitis*, New York five, New Orleans three, Brooklyn and St. Louis two each, Boston, Buffalo, Providence, Fall River, Taunton, and Waltham one each. From *whooping-cough*, New York and Brooklyn three each, Philadelphia, St. Louis, and Pittsburg two each, Cincinnati, Buffalo, Providence, New Haven, Nashville, and Northampton one each. From *erysipelas*, New York six, Philadelphia, Cincinnati, and Buffalo two each, Brooklyn, Boston, Baltimore, and Pittsburg one each. From *malarial fevers*, New York five, New Orleans four, Brooklyn three, St. Louis and Baltimore two each. From *puerperal fever*, Boston three, St. Louis two, Cincinnati, Milwaukee, and Holyoke, one each.

Two hundred and thirty-six cases of small-pox were reported in Baltimore, Cincinnati four, Pittsburg four, Boston one; diphtheria 39, scarlet fever 21, typhoid fever three, in Boston; scarlet fever 16 and diphtheria six in Milwaukee.

In 37 cities and towns of Massachusetts, with a population of 968,915 (population of the State 1,783,086), the total death-rate for the week was 20.32 against 19.79 and 21.58, for the previous two weeks.

In the 28 towns of England and Wales, with an estimated population of 8,620,975, for the week ending January 13th, the death-rate was 22.4. Deaths reported 3708: acute diseases of the respiratory organs (London) 361, whooping-cough 107, scarlet fever 77, measles 68, fever 54, diarrhœal diseases 32, diphtheria 18, small-pox (London seven) seven. The death-rates ranged from 9.1 in Derby to 33.7 in Liverpool; Brighton 14.1; Leicester 18.5; Nottingham 19.9; London 20.7; Birmingham 22; Sheffield 23.1; Newcastle-on-Tyne 24.4; Leeds 26; Plymouth 27.8; Manchester 28.9. In Edinburgh 17.9; Glasgow 30.6; Dublin 29.4.

For the week ending January 13th, in the Swiss towns, population 494,390, there were 31 deaths from consumption, lung diseases 25, diphtheria and croup 13, diarrhœal diseases 12, scarlet fever three, typhoid fever three, whooping-cough one. The death-rates were, at Geneva 15.4; Zurich 20; Basle 15.1; Berne 30.5.

The meteorological record for the week ending January 27th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
January, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 21	29.747	31	49	18	100	64	70	78	W	W	W	8	16	14	R	O	O	—	—
Mon., 22	30.210	15	22	7	51	44	70	55	W	W	W	16	16	9	F	F	C	—	—
Tues., 23	30.378	8	14	0	49	40	55	48	W	W	W	13	15	14	C	C	C	—	—
Wed., 24	30.384	18	29	6	43	48	83	58	W	SW	SW	13	4	10	C	O	C	—	—
Thurs., 25	30.346	25	31	16	90	50	53	64	W	NW	NW	8	11	6	O	O	F	—	—
Fri., 26	30.460	23	32	8	58	60	88	69	NW	SE	SE	12	5	1	C	C	C	—	—
Sat., 27	30.101	35	43	19	75	82	82	80	S	SW	W	4	10	6	O	O	O	—	—
Means, the week.	30.232	22						65										9.20	.57

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JANUARY 26, 1883, TO FEBRUARY 3, 1883.

WATERS, WILLIAM E., major and surgeon. Detailed as member of Army Retiring Board to convene at Fort Porter, Buffalo, N. Y., February 2, 1883. Paragraph 1, S. O. 21, A. G. O., January 25, 1883.

KILBOURNE, HENRY S., captain and assistant surgeon. The leave of absence granted December 21, 1882, Department of Dakota, is extended two months. Paragraph 3, S. O. 24, A. G. O., January 29, 1883.

PAULDING, H. O., captain and assistant surgeon. Granted leave of absence for one month, to take effect on or about the 1st of February. Paragraph 1, S. O. 11, Department of the Platte, January 27, 1883.

PRICE, CURTIS E., captain and assistant surgeon. Detailed as member of Army Retiring Board to convene at Fort Porter, Buffalo, N. Y., February 2, 1883. Paragraph 1, S. O. 21, A. G. O., January 25, 1883.

WOOD, MARSHALL W., captain and assistant surgeon. At expiration of present leave of absence relieved from duty in the Department of the East. Paragraph 1, S. O. 15, Department of the East, January 26, 1883.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, OCTOBER 1, 1882, TO DECEMBER 31, 1882, *continued.*

HEATH, W. H., passed assistant surgeon. Granted leave of absence for fourteen days. December 28, 1882.

PORTER, F. D., passed assistant surgeon. To inspect keepers and crews of the Life Saving Service. October 5, 1882.

To proceed to Evansville, Ind., for temporary duty. November 21, 1882.

To proceed to Charleston, S. C., and assume charge of the service. December 21, 1882.

O'CONNOR, F. J., assistant surgeon. To proceed to Norfolk, Va., for temporary duty. October 14, 1882.

To rejoin his station (Detroit). November 4, 1882.

WHEELER, W. A., assistant surgeon. Relieved of duty at Charleston, S. C., and placed on waiting orders. December 22, 1882.

ARMSTRONG, S. T., assistant surgeon. To examine keepers and crews of the Life Saving Service. October 5, 1882.

BENNETT, P. H., assistant surgeon. To examine keepers and crews of the Life Saving Service. October 5, 1882.

AMES, R. P. M., assistant surgeon. Granted leave of absence for twenty-one days. November 23, 1882.

DEVAN, S. C., assistant surgeon. To examine keepers and crews of the Life Saving Service. October 13, 1882.

To inspect unserviceable property at the San Francisco Marine Hospital. October 20, 1882.

KALLOCH, P. C., assistant surgeon. To inspect keepers and crews of the Life Saving Service. October 5, 1882.

SUFFOLK DISTRICT MEDICAL SOCIETY. THE SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE will meet at 19 Boylston Place, on Wednesday evening, February 14th, at 7.45 o'clock. The following papers will be presented: Dr. F. A. Harris, The Medical Evidence in the Malley Trial. Dr. B. O. Kinnear, Explanatory Remarks upon Neuro-Dynamic Medicine, with Cases. Dr. G. H. Lyman, A Case of Embolism of the Left Middle Cerebral Artery. Dr. C. E. Wing, A Case of Inverted Uterus treated by the Modern Methods. Dr. M. H. Richardson, A Case of Empyema.

ALBERT N. BLODGETT, *Secretary.*

THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT will meet Monday, February 12th, at eight P. M., in the Medical Library. Dr. S. G. Webber will read a paper on Some Ocular Symptoms associated with Lesions of the Pons Varolii and Neighboring Parts.

EDWARD M. BUCKINGHAM, M. D., *Secretary.*

BOOKS AND PAMPHLETS RECEIVED. — The Value of Graduated Pressure in the Treatment of Diseases of the Vagina, Uterus, Ovaries, and other Appendages. By Nathan Bozeman, M. D. New York. (Reprint.)

House Drainage and Sanitary Plumbing. By William Paul Gerhard, Civil and Sanitary Engineer. New York: D. Van Nostrand. 1882. (A. Williams & Co.)

The Management of Chronic Inebriates and Insane Drunkards. By Albert N. Blodgett, M. D. Boston. 1882.

The Hospital Treatment of Diseases of the Heart and Lungs, with over three hundred and fifty Formulæ and Prescriptions, as exemplified in the hospitals of New York city. By Charles H. Goodwin, M. D. New York: Charles H. Goodwin, M. D., 245 West Fifty-Third Street.

A National Bankrupt Law. Speeches by Hon. George F. Hoar, of Massachusetts, in the Senate of the United States, June 23, and December 8 and 9, 1882.

The Structure of the Muscles of the Lobster. By M. L. Holbrook, M. D., New York. (Reprint.)

The Termination of the Nerves in the Liver. By M. D. Holbrook, M. D. New York. (Reprint.)

Transactions of the Medical Society of the State of New York for the Year 1882. Published by the Society.

Address delivered before the American Academy of Dental Science, at their Fifteenth Annual Meeting, held in Boston October 25, 1882. By Frank Abbott, M. D.

A Case of Melanosis. By William H. Tubbs, M. D. Cincinnati, O. (Reprint.)

Medical Society of the State of Tennessee Transactions. 1882. Forty-Ninth Annual Meeting.

Massage. Its Mode of Application and its Effects. By Dr. Douglas Graham. Boston. (Reprint.)

A Large Fibro-Cyst of the Uterus and Ovarian Cystoma coexisting with Pregnancy; Operation; Recovery. By Walter Coles, M. D. St. Louis. (Reprint.)

Variola. A Series of Twenty-One Heliotype Plates illustrating the Progressive Stages of the Eruption. Boston: Samuel A. Powers. 1882.

Fourth Annual Report of the State Board of Health of Illinois. Springfield. 1882.

Lectures.

OPENING LECTURE ON DISEASES OF CHILDREN AT THE POST-GRADUATE MEDICAL SCHOOL, NEW YORK.[1]

BY MARY PUTNAM JACOBI, M. D.

II.

As we approach the birth point in the survey of the child's history, we are made aware of the persistent influence of many conditions which have dominated fœtal and embryonic life. The process of cleavage, the process of curvature, the principle of inequality in the growth of parts, and that of mutual limitations of growth, govern, taken together, the course of embryonic evolution. They constitute a set of mechanical conditions which, in continuation with the one vital process of continuous growth, suffice to produce the marvelous results of that evolution. The mechanical influence, principally of pressure, is exerted in the first place by the membrane investing the embryonic mass, or, in other words, by the external medium; in the second place by the parts of the organism reciprocally upon one another. Throughout childhood this special susceptibility to mechanical influences persists, and, as in embryonic life, these are exerted first, by the external medium upon the growing organism, second, by the parts of that organism reciprocally upon each other. This is a fundamental fact which offers the key to many of the peculiarities of infantile pathology, as we propose to show in detail.

The fertile results which may be obtained from the simple influence of continuous pressure exerted upon masses continually increasing in size is remarkably shown in the process of cleavage. This is not primary or self-determined, but is brought about, first, by the pressure of the investing membrane upon the protoplasmic masses, second, by the retractile force of these masses themselves. The segmentation of the ovum — the first step in its development after fecundation — offers the first example of this process. This diagram, enlarged from Kölliker, exhibits the segmentation of the ovum of an ascaris. The second example is found in the cleavage of the blastoderm into three layers: the ectoderm, entoderm, and mesoderm. It is shown in this diagram. The formation of the cleft for the spinal column, of those for the pleuro-peritoneal cavity and pharynx, of the bronchial clefts, the segmentation of the provertebræ, and finally the segmentation of the limbs, are all important illustrations of the process of cleavage, determined in each case by the double mechanism above described.

After birth no cleavage process ever occurs, but we encounter several pathological conditions dependent on errors of cleavage, on its excess, more rarely on its deficiency, most often on the persistence of clefts, which, in the normal course of development, should have become closed. A complete cleavage of the ovum, previous to the differentiation of its parts, results in a twin pregnancy. It implies an excess of formative material, but may be considered as the first step towards a monstrosity. (Ahlfeld.) Partial cleavage of the caudal or cephalic extremity, or of both, results in the development of different kinds of double monsters. Excess of cleavage at the extremity of the limb buds causes supernumerary fingers or toes. I here show you a child presenting such a deformity. The process of cleavage, continuing after the different fingers had been differentiated, has split up the thumb segment into two unequal parts. In the larger or internal segment the two phalanges continue in a straight line with the metacarpal bone. The smaller external segment stands out at an angle with the metacarpal bone, being apparently articulated with a facet on its distal and outer extremity.

Failure of cleavage determines various degrees of apparent fusion of parts, a deformity again principally observed in the limbs. Web fingers or toes constitute the lightest grade of this deformity. The fingers are well formed, but connected by a fleshy membrane, not difficult to divide, but whose parts show an almost incoercible tendency to grow together again. The fingers may, however, be fused into a solid mass; the two lower extremities may remain united in a species of tapering tail, and constituting the viable monster known as the siren.

The most numerous malformations, however, connected with the process of cleavage are those which result from a failure to close of a cleft destined only for temporary existence. Thus persistence of an extensive portion of the dorsal cleft determines a hemicephalus, of a more limited portion, with protrusion of the spinal membranes, a spina bifida. Of the latter malformation I here exhibit to you a living specimen. The hernial tumor is situated, as you will notice, in the seat of election, the lumbar region, the vertebral arches being here entirely deficient. The greater frequency of spina bifida in this region is explained by the fact that closure of the dorsal cleft is effected from above downwards, as is shown in this diagram. Hence the lumbar region remains open for the longest time.

I defer more detailed study of this interesting case to another occasion. I merely point out here that the hemispheric tumor, as large as half of a large orange, is deprived of skin, and its thin, membranous surface superficially ulcerated; that the child, which is seven months old, though enjoying fair health, is much emaciated, and, for a month or two, has exhibited the symptoms of a chronic internal hydrocephalus; finally, that the lower extremities are congenitally paralyzed, and both feet are in marked talipes calcaneus. It is probable, therefore, that a dropsy of the central canal of the cord exists, which has gradually extended to the ventricles of the brain, of which the central canal is normally the continuation.

On the anterior surface of the body malformations are frequently encountered, which result from failure of union of the lateral segments of the body. Hare lip and cleft palate (the deformity is shown in this baby) are caused by the failure of fusion between the superior maxillary processes, with the frontal or intermaxillary process. The relative position of these parts at the eighth week of fœtal life is shown in this wax model. The deformity caused by the interruption, between the ninth and tenth week, of the normal process of fusion, constitutes ninety-nine per cent. of all cases of malformation of the face.

Fissure of the sternum, or, from partial failure to close of the abdominal plates, umbilical hernia, and vesical ectopia, may be mentioned as further illustrations of malformations dependent on abnormal persistence of cleavage. On the lateral walls of the fœtus partial persistence of the bronchial clefts leads to certain congenital cysts of the neck; while within the

[1] Concluded from page 123.

pleuro-peritoneal cavity, though the abdominal plates be closed, failure in the development of one lateral half of the diaphragm necessitates the fatal accident of diaphragmatic hernia.

"It is no explanation," observes Ahlfeld, of these malformations, "to say that they result from an arrest of development. The question is, What has caused such arrest?" and the author assigns five principal causes: first, an insufficiency of formative material; second, pressure from without of too tense amniotic membranes, together with, possibly, deficiency of amniotic liquor; third, pressure from within of dropsical effusions; fourth, interposition, or even adhesion of amniotic folds; fifth, prolapse of some part between the segments destined for fusion.

The process of curvature is as important as that of cleavage in embryonic evolution. To understand its causation and consequence, His advises the student to take a cylinder of wax and slowly press down one extremity towards the other, in the long axis of the cylinder. This will cause a bulging out on each side of the compressed extremity, and the development of a transverse cleft running across it, and connecting the bulging points. The cleft becomes more apparent when a hollow cylinder of india rubber is used, instead of a solid cylinder of wax, and the extremity is curved forward at the same time that it is compressed. It then not inaptly represents the buccal cleft, which develops across the cephalic extremity of the embryo, at the moment that this undergoes the so-called "cephalic curvature" forwards. This curve is shown on this wax model, and also on this diagram enlarged from His. Not only the buccal cleft and cavity, but the lense cavities are formed by this same mechanism; the oculo-nasal cleft is deepened, the forehead acquires prominence, and lateral folds or ridges are thrown up in the neck, between which the bronchial clefts are destined to appear.

The cephalic curvature is observed only in the embryos of mammalia, birds, reptiles; and these alone exhibit the development of the amniotic fold over the cephalic extremity, known as the amniotic hood. His derives the first of these nearly contemporaneous processes from the second, showing that the pressure of the amniotic fold upon the constantly growing head of the embryo necessitates the forward curvature of the latter. The mechanical influence of pressure, combined with the single vital process of continuous growth, thus again suffices to determine most complex results.

The same influence of external pressure is continued after birth, throughout infancy and childhood, and, indeed, until all portions of the organism have become solid enough to resist it. The physiological curves of the spinal column are developed by the weight of the head and shoulders when the child begins to assume a sitting and upright position. When the weight to be supported increases out of proportion to the process of consolidation in the vertebræ, and if it become unequally distributed, the pathological curves of scoliosis are formed. The fact, recently established by Beneke, of the great increase in the volume of the heart and lungs about the period of puberty is probably correlative with the special morbid liability to scoliosis noted for this same period. The greater size of the right lung, which has often been alleged as at least one cause of the curvature of the cervico-dorsal spine to the right, may more plausibly be considered so, when it is known that the lungs at early maturity have attained to twenty times their volume at birth. The heart, whose inclination towards the left should balance the excess of weight of the right lung, only increases twelve or thirteen times its original size. But it has been further noted by Beneke, that, in anæmic and phthisical persons, the development of the heart which should take a sudden leap forward during the year of the establishment of puberty remains insufficient, and does not attain the size which is needed as a make-weight to the lung.[1] It is precisely such persons as are most liable to the scoliosis of adolescence. They are also liable to excess of growth of the osseous frame-work of the body, out of proportion to the vigor of its viscera; hence, again, to an excess of weight to be supported by an abnormally soft spinal column.

The more extensive softening, especially of the intervertebral disks, caused by rachitis, occurs at an earlier period, while weight is evenly distributed, and the influence of sitting postures, right arm exercise, etc., have not yet been experienced. The curve, then, instead of being lateral and partial, is general, is in cyphosis. A case of this kind in an extremely rachitical boy of five years old was sent to my clinic as paralyzed. He indeed could not walk nor hold his trunk erect; but upon being supported in a plaster jacket he was able to do both, and under the use of cod-liver oil, iron, and lime, entirely recovered.

Depression of the ribs, of the cranial bones (craniotabes), curvature of the femurs and tibiæ, are all well known results of the influence of pressure steadily exerted upon the softened bones of rachitical children. The lower limbs frequently exhibit the characteristic curvatures before they have ever borne the weight of the body. The deformity seems, then, to be attributable to the inability of the extensor muscles to correct the attitudes of flexion first assumed by the limbs.

Another interesting illustration of the influence of weight, or the pressure exercised by it, is offered by the deformities consequent upon infantile spinal paralysis. A certain number of authors have explained these deformities by the persistent terms of non-paralyzed muscles whose antagonists had been paralyzed. In reality, however, the deformity is due to the influence of a weight which tends to press the limb in a certain direction, from which the paralyzed muscles are unable to withdraw it. Rachitic paresis of muscles or softness of ligaments have the same result. The weight of the body pressing in the direction of the long axis of the femur from above downward, and from without inward, comes against the internal lateral ligament of the knee-joint, and being insufficiently resisted by the contraction of muscles which should maintain the leg in a straight line with the thigh, constantly exaggerates the angle existing between these two segments until genu valgum results. Valgus of the foot is formed when similar pressure is exerted at the internal lateral ligament of the ankle-joint; flat foot when the arch of the foot is pressed down by a dead weight inadequately taken up by the elastic force of plantar muscles and ligaments.

The effects of pressure are most striking in relation to an undeveloped organism, because the part which has been deviated in a vicious direction continues to grow in that. The effect of the deviation, therefore,

[1] The influence of such defect in lowering the force of the pulmonary circulation, facilitating caseation of inflammatory products, is of course of even greater importance.

not only persists, but continually tends to increase. But all living parts, even when ceasing to increase, are subjected to a constant molecular change by the movements of nutrition, and these movements are liable to be deviated in an increasingly intense degree by the influence of even an unvarying pressure even in an adult or slowly growing part. Hence therapeutic influences of much value. Pressure and position may be utilized to promote lymphatic absorption; to change currents of circulation; to determine local atrophy. Probably the value of such mechanical agencies is as yet only imperfectly appreciated. Their power is best to be learned by studying their influence upon embryonic evolution and in the physiology and pathology of childhood.

The third fact of embryonic development which we find still potent in childhood is the inequality in the rate of growth of different parts of the organism. This unequal growth is, during embryonic life, an important factor in the formation of the folds, clefts, and curves we have just been considering. After birth, the same inequality persisting, determines a succession of phases, both in physiological function and capacity, and in morbid imminence. It is incorrect to assert that at birth the child is an entirely imperfect being. The functions of capillary circulation, of molecular nutrition, of urinary excretion, are performed with more surety and vigor than at many other periods of life. The dangers arising from novelty of function in the respiratory apparatus and the great susceptibility to cold are largely compensated by the peculiarities in the relations between the heart and the lungs. During infancy the pulmonary artery remains wider than the aorta, and pressure in the pulmonary exceeds that in the systemic circulation. Extensive obstruction to the circulation, with obstacle to the work of the right heart, occurs, therefore, less frequently than in adult life, where the conditions are reversed, and the force of the pulmonic circulation falls below that of the systemic. Hence paralysis of the heart from mechanical causes, as the obstruction to the circulation caused by pneumonia, is less liable to occur; and thus pneumonia is really a less dangerous disease in children than in adults. During fœtal life marked inequality exists in the distribution of oxygenated blood. This comes from the placenta by the umbilical vein, and, brought to the heart by the inferior vena cava, is carried directly across the right auricle to the foramen ovale by means of the Eustachian valve, that really forms a special channel for its conduction. It is this blood which reaches, almost unmixed, the left ventricle, to be thence thrown through the aorta and the vessels springing from its arch towards the cephalic extremity of the fœtus, towards the brain, and more especially the medulla, with its important cardiac and respiratory centres. These, therefore, get a special start in development. On the other hand, the venous blood returned from the head and the upper extremities enters the right auricle in front of the Eustachian valve, or channel, and, by the pulmonary artery and ductus arteriosus, reaches the descending aorta, to be distributed unmixed to the lower half of the body. This, therefore, remains retarded in development as compared with the upper half, and not only the limbs, but the lower portion of the spinal cord, with the ganglionic centres governing the limbs and the pelvic organs.

Now it is a fact that the lumbar portion of the cord and spinal column show, certainly throughout childhood, a morbid imminence superior to that of the upper portions. Osteo-myelitis, in the one, anterior poliomyelitis in the other are much more frequent in the lumbar than in the dorsal or cervical regions. We have already alluded to the predilection of spina bifida for this region, where the vetebral arches are the last to close. May we not consider all these facts as the consequences of a nutrition, defective in comparison with that of the upper nerve centres and spinal column? We may even go further and trace to such disproportion, failing to lessen, or even increasing, with advancing years, such imperfect development of the utero-ovarian system in many anæmic children as entails disease as soon as these organs enter upon function. If the maximum nutritive currents of the body only just touch par the minimum cannot fail to fall below the level of healthy vitality.

The foregoing considerations are theoretical. Practical precautions of great importance are required in the adjustment of external media to the unequally unfolding organism of the child. The adjustment of foods to the successive phases of development of the digestive organs; of effort to those of the locomotor apparatus; perhaps, most difficult of all, of action and rest to the complex phases in the development of different parts of the nervous system. It would carry us much too far to show how profoundly this principle enters into the guidance of mental development; and how much it has been overlooked until most recent times. The child's mind and body for centuries has been looked at simply as a miniature of the man's; the fact that the inter-relation of their parts was differently proportioned has, until now, been most dimly apprehended.

The final principle to which I would call your attention is that of the mutual limitation of parts. In the embryo the natural termination of the growth of any mass of cells is effected when it is brought in contact with an opposing mass, growing with equal or superior vigor. Failure in the establishment of such limiting contact results in the undue growth of the first mass of cells. An interesting illustration of such failure drawn from infantile pathology is suggested by a remark of Bouchard. This author would explain the excessive growth of the medulla, of bones in rachitis, by the defective calcification of the bones. The medullary elements, insufficiently imprisoned in calcareous envelope, are left free to develop immoderately.

Diminution in the calcareous matter of long bones, occasioned by prolonged febrile diseases, may similarly help to explain the growth of the patient, which is often observed in convalescence from such diseases. The medullary elements undergo a nutritive irritation in virtue of the febrile disease; this coinciding with a diminished resistance in the osseous envelope is liable to determine in adolescents a sudden increase of growth, which is not of good augury, inasmuch as nutritive material is thus withdrawn from nervo-muscular tissues greatly in need of repair. This same reason justifies the popular dread of "outgrowing the strength," a process frequently observed in delicate children or youth. When, moreover, with elongation of the skeleton the heart and lungs fail to grow in proportion; when, by increasing length of the neck, the brain is removed farther from the heart, and thus receives its impact of blood less forcibly, muscular weariness, anæmic headaches soon result.

These few examples may serve to illustrate a prin-

ciple whose application is probably far-reaching. It is possible that the primary reason for the development of neoplasms consists in a failure of normal tissues to limit the growth of certain elements either homogeneous or heterogenously imprisoned in the organism at birth. (Cohnheim.)

The foregoing most cursory survey briefly indicates the line of thought which seems to me most profitable to pursue in studying the diseases of children. With all considerations drawn from general pathology are to be combined those based upon the special fact of continuous growth, of unequally rapid evolution. The morbid conditions altogether peculiar to childhood are to be understood only by reference to circumstances of development. Study of disease common to children and to adults must be outlined in its main features in the latter, but then specially adapted to the former, and peculiarities explained by, again, peculiarities in the phase of development. And to thoroughly understand the meaning of developmental processes these must be studied where they are most rapid and their results most vivid and striking, namely, in the embryo and fœtus. Here may be first acquired the full conception of the wonderful flexibility of living things, of the ceaseless rush of life towards its goal; of the curve of changes so incredibly rapid at the outset, so gradually slackening throughout childhood towards the relative stability of adult existence, to finally recommence, substituting for the original increment a constant decrement of force, until the wave of life terminates in death.

Original Articles.

DEATH FROM RUPTURE OF AN ANEURISM OF THE SPLENIC ARTERY.[1]

BY JAMES B. AYER, M. D., BOSTON.

MRS. H. was married at the age of sixteen, and one year later gave birth to a child. Up to this time she had enjoyed excellent health. When her babe was three months old she was seized with severe abdominal pain, which she attributed to thoughtlessly placing her hands in cold water. It is probable that she suffered from an attack of peritonitis at this time, though she continued to nurse the child. She was confined to the house three months, and was much debilitated.

The child died at the age of two and one half years of brain disease. Three years later a second child was born, and two years afterward a third, both of whom succumbed in early infancy to cerebral affections. She also had repeated miscarriages.

During the eight and a half years of married life she fell from one hundred and forty to one hundred and eight pounds in weight, and was extremely nervous, at times hysterical. She suffered at rare intervals with pain resembling gastralgia. Afterward she suffered occasionally from epigastric pain (sometimes connected with her monthly flow, but not invariably) up to January, 1871, when, suddenly, at the age of thirty-three, menstruation, which had previously been regular in every way, ceased, and there appeared in its stead severe attacks of pain in the neighborhood of the stomach, accompanied by epistaxis. These attacks were preceded for thirty to sixty minutes by a disagreeable sensation in the epigastrium, accompanied by depression and dread of suffering. The stomach seemed to be bloated, and the extremities chilled. The first impulse was to lie down and to double up until vomiting gave a little relief. The vomiting, which at the outset was never bilious in character (although when protracted it became so), was accompanied by moderate epistaxis.

For many years the attacks when promptly treated by morphine quickly subsided. In from two to twenty-four hours the stomach seemed fully restored to its normal condition, and our patient was again able to resume her duties. She had charge of a large boarding-house, and had a great amount of responsibility and care.

Mrs. H. was under the care of my father and myself during the greater portion of the last thirteen years. At no time were there symptoms of uterine disease or of peritonitis during this period. The pain resembled that of the passage of gall-stones, but frequent examination of the discharges showed the absence of calculi. Once during this period Mrs. H. was free from pain seven consecutive months, but, as a rule, suffered monthly. Of late years the attacks became more severe, and were of longer duration, but she always made a good recovery.

October 31st last she suffered from an unusually severe attack, which was followed by an irregular febrile attack, confining her to the house until November 20th. She could not be influenced by counsel as soon as the acute symptoms passed. Therefore I was not surprised to learn that on the 24th she was out-of-doors in the forenoon driving her horse, and in the afternoon was down town shopping. On this latter occasion a sudden and copious hæmatemesis came on, which came near proving fatal. She rallied, however, was kept very quiet, and was apparently steadily regaining health until the 7th instant, when dyspnœa was noticed. For several days she had complained of pain in the left side. Examination on the 7th showed a slight pleuritic effusion on the left side, which increased in amount up to the 9th, and came to a standstill. There was slight fever on the 7th, none on the 9th. Mrs. H. again seemed to be slowly rallying, and sedatives (which for a fortnight had been freely given) were now rarely required.

At three P. M. on the 11th instant she seemed to her friends to be in good spirits and very comfortable; she had just called for a book to read when she felt a sudden desire for an evacuation from the bowels, and fell to the floor. She passed blood, and vomited a few ounces of bright blood mixed with glairy mucus. Violent epigastric pain returned, and when I reached her, a few moments later, she begged frantically for ether. She was blanched, the pulse could hardly be felt, and I did not dare to give it to her. In fifteen minutes she ceased to breathe.

For many years we had been deceived by the magical recuperative powers of our patient, and had believed that organic disease did not exist, but had hoped (up to near the end of life) that the symptoms could be explained by periodical gastralgia. Repeated examinations during these years gave us no reason to suspect that the symptoms were due to aneurism.

Autopsy by Dr. E. G. Cutler eighteen hours after death.

There was about twelve ounces of fluid in the left pleural sac, of amber color, and containing several

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, December 13, 1882.

flakes of fibrine. The base of the left lung was adherent, the greater part of the lower lobe retracted and containing no air. At the apex the pleura was slightly thickened over a space the size of a silver quarter of a dollar. The right lung was free; at its base was a similar thickening of the pleura. The lungs were anæmic.

The heart was pale, firm, and of normal size; valves and muscle healthy. There was atheromatous degeneration of the aorta just above the aortic valves, and in patches along its entire course.

The stomach, liver, ascending, transverse, and descending colon and omentum were adherent to the anterior abdominal wall. The omentum was spread out, and attached in the pelvis to the broad ligaments on each side of the uterus. The stomach was distended by blood coagula and bloody fluid. The mucous membrane was covered by a dense layer of mucus. On the posterior wall at the cardiac end were two small perforations, with ragged, oval, shreddy edges, as large as a quill. These led into a large sac filled with soft clot, and with walls made up of spleen, diaphragm, stomach, liver, pancreas, and adhesions, and a portion of the wall of the splenic artery. On following up the arteries from the aorta it was found that the splenic artery had undergone aneurismal dilatation with rupture. The lower segment of the spleen was much softened, and appeared to be in a condition of anæmic necrosis.

The uterus was rather small; the Fallopian tubes were closed near the fimbriated extremity by the adhesions of the omentum spoken of above; there were old adhesions in Douglas' space.

The left ovary was greatly atrophied, and held in a dense cicatricial mass. The right ovary, the size of a large bean, on section was found to have a cyst occupying its entire bulk, filled with yellowish, apparently cheesy matter.

The other organs were simply anæmic.

RECENT PROGRESS IN FORENSIC MEDICINE.

BY F. W. DRAPER, M. D.

THE MEDICO-LEGAL RELATIONS OF RUPTURE OF THE SPLEEN.[1]

Dr. Pellereau, whose position as police surgeon and medical attendant at the prisons in the island of Mauritius enables him to speak with authority from his experience, states that in that tropical climate one of the most common causes of sudden death is the rupture of the spleen. Under the influence of malaria the organ takes on changes in its capsule and in its substance which favor this accident; its size is largely increased and its firmness is lessened, so that it is easily fractured. A table is given by the author which shows that of fifty-four cases of sudden and violent deaths occurring in two years and a half, and requiring his investigation, thirteen were caused by rupture of the spleen, nine being the result of blows or falls, and four having been of spontaneous origin.

The symptoms of rupture of the spleen, as observed by Dr. Pellereau, were those of collapse, more or less severe. There is pain, of a sharp and transitory character, referred to the left side; generally the patient falls with a cry, and presses his hand over the injured part. Hæmorrhage is the immediate cause of death, and the symptoms and suddenness of the fatal result depend largely on this hæmorrhage, its amount, and its source, and this in turn on the extent and situation of the rupture. Most of the symptoms, especially those which follow the initial shock, are attributable to the loss of blood. The post-mortem appearances, too, are largely the familiar ones of anæmia. The lesions found in the spleen vary greatly in depth and shape, as well as in situation and number. Sometimes they are longitudinal, at other times circular; they may be triangular or stellate; their borders may be smooth, as if cut with a knife, or they may be irregular and indented.

The author concludes his observations with answers to probable medico-legal questions that may arise in connection with rupture of the spleen. He declares that in tropical countries the organ being hypertrophied and softened its rupture is easy, the slightest violence being sufficient to produce that result; in other countries, where malaria is uncommon, the injury requires a considerable degree of force. Under favorable conditions in the organ itself the spleen may be ruptured by *contre-coup*. There is no way of distinguishing traumatic from spontaneous ruptures except by the presence of external lesions, and these are exceptional. The spleen may be broken by a blow or a fall without any contusion or external indication of violence whatever. A man can go about or continue his work, indeed, after his spleen has been ruptured; he may live for days, long enough for a secondary peritonitis to be developed, but generally death follows in a few minutes, or hours at the most.

ON RAPE DURING HYPNOTIC SLEEP.[2]

In the winter of 1880–81 a "magnetizer" visited Neuchâtel, and by his public exhibitions of his powers created a "magnetic" epidemic, especially among the young people. One of the results of this excitement became the subject of a judicial investigation. A young woman applied, through her pastor, for accommodations at a lying-in hospital for her approaching confinement. She declared that she was eight months pregnant, and that her pregnancy dated from one evening when she was alone with a young man who had the power of "magnetizing" her, and who had violated her after he had put her to sleep. The case came to the notice of the district officers of justice, and Dr. Ladame was required to answer, as an expert, the following questions: —

(1.) Is the statement of Maria F. to be regarded as trustworthy in its general features?

(2.) Did the sexual connection take place under the conditions described by her and without her ability to account for it?

(3.) Was her will wholly paralyzed, and could she not have resisted her seducer?

(4.) Is conception possible when the woman is in a state of absolute insensibility?

Dr. Ladame, in his reply to these judicial inquiries, first calls attention to the novelty of the subject in its medico-legal relations. He states that only four authentic cases of the kind in question are on record in medical literature. Liman, professor of legal medicine at Berlin, declares that in his experience of twenty

[1] Annales d'Hygiene et de Médicine Légale, March, 1882, page 223.

[2] Annales d'Hygiene et de Médicine Légale, June, 1882, page 518.

years as a medical jurist he has not seen a single instance of magnetic sleep, and that he has never been called upon to pronounce upon a criminal case relating to magnetism. Hofmann, of Vienna, likewise asserts that he does not know a single case recorded in German literature of rape during hypnotic sleep.

In France the first case published occurred in 1858. MM. Coste and Broquier, the experts in this case, summarized their conclusions as follows: "We think that it is possible that a young woman should be deflowered and impregnated against her will, her powers of volition being overcome at the time by magnetism." The experts in this affair remarked further that "if a young woman under the influence of magnetic sleep is insensible to all sorts of pain it seems reasonable to admit that she can undergo the act of sexual intercourse without any voluntary participation in it, without, indeed, any knowledge of it, and that consequently she could not forcibly resist it." Devergie agreed, in consultation, with these conclusions, although he called attention to the great ease with which magnetic sleep could be simulated under such circumstances. Tardieu gave a qualified assent to these opinions, but remarked particularly upon the possibility of deception.

In a second case (1865) the experts expressed themselves in nearly the same terms as did those in the affair just related. A third case was published by Tardieu in 1878,[1] and a fourth, and the latest on record (1879), was under the investigation of Brouardel, professor of legal medicine at Paris, who arrived at results very nearly like those in the preceding instances, namely, that a girl may be violated during magnetic sleep.

After a full and interesting discussion of the various topics relating to the case under his observation, — the phenomena of hypnotism, the degrees to which the will of the victim may be overcome, the possibility of sexual intercourse in this condition without the consent of the woman, the means of distinguishing genuine from fraudulent hypnotism, the possibility of conception when the woman is unconscious from any cause, the author formulates as follows his answers to the questions propounded to him: —

(1.) We are compelled to admit that Maria F. could be violated by Louis V. after being magnetized by him. In this state she could not resist the intercourse, and she has not preserved any remembrance of what transpired, or a confused recollection of a part only of the occurrence.

(2.) Conception has frequently followed rape, and the date of the confinement of this girl shows that the fecundation coincided with the time of the alleged rape.

(3.) In the absence of a medico-legal investigation immediately after the occurrences in which the two parties were involved on the occasion in question, it is impossible to affirm positively that the woman was really put to sleep by magnetic influence with criminal intent and ravished while in that condition.

(4.) It would doubtless be easy to obtain a detailed account of that scene by magnetizing Maria F., but the experiment might be exposed to error, because in hypnotic sleep one can voluntarily or involuntarily suggest to the person sleeping dreams and hallucinations of which she describes the details with astonishing precision.

[1] Étude medico-légale sur les Attentats aux Mœurs, page 9.

(5.) Although important information might be gained by this renewed magnetizing of the woman, it would not in any case serve as sufficient evidence upon which to base a judicial conclusion.

MENINGEAL HÆMORRHAGE.[2]

Inter-arachnoid effusions have a very important medico-legal bearing, for the surgeon may be called upon to express an opinion whether the hæmorrhage is the result of violence, and the life of an accused person may largely depend on the surgical evidence. In doubtful cases two questions may be raised in defense of a person accused of murdering the subject of such a hæmorrhage: (1) was not the hæmorrhage the result of a diseased state of the blood or tissues of the deceased, or of over-excitement; (2) if disease or excitement was not the immediate cause of the hæmorrhage, was it not a strong predisposing cause, and would the same amount of violence have excited fatal hæmorrhage in a perfectly healthy person?

Mr. Morris summarizes his conclusions on the subject of meningeal hæmorrhage as follows: —

(1.) Spontaneous effusions into the cavity of the arachnoid, that is to say, effusions of blood from disease or excitement, are very often not to be distinguished from traumatic effusions.

(2.) Post-mortem examination does not always explain the cause or the source of the effusion, and the state of the blood-clot is only a very rough test of the age of the effusion.

(3.) Extravasation of blood between the dura mater and the bones, as also extravasations beneath the visceral arachnoid, accompanied by brain-bruising, are almost certainly traumatic, whether fracture coexist or not. Extravasations into the substance of the brain and into the ventricles are almost certainly spontaneous when no fracture and no brain-bruising coexists, and are probably so even when fracture without bruising of the cerebral surface is found.

(4.) Spontaneous effusions may occur without any naked-eye evidence of disease of the cerebral or meningeal vessels.

(5.) Spontaneous effusions into the arachnoid cavity from disease or excitement have occurred as early as the twelfth year of life, and at all ages subsequent to puberty. Inter-arachnoid hæmorrhage occurs at any age from violence.

(6.) In slight injuries of the head, such as small scalp-wounds, without fracture of the skull or bruising of the surface of the brain, the surgeon should be extremely cautious in attributing inter-arachnoid extravasation to a blow, and more especially when the injured person is of intemperate habits.

ON DEATH BY DROWNING.[3]

The frequency with which cases of drowning occur in the practice of medical jurists renders it of importance, from time to time, to pass under review in the light of experience the various post-mortem signs which indicate this form of death. This paper of Dr. Ogston has, as its basis, one hundred and seventy cases, in one hundred and thirty of which the bodies were

[2] Clinical Lecture on Hæmorrhage into the Cavity of the Arachnoid, its Surgical and Medico-Legal Aspects. By Henry Morris, M. A., F. R. C. S. Lancet, November 11, 1882.

[3] A Critical Review of the Post-Mortem Signs of Drowning. By Francis Ogston, Jr., M. D., Assistant to the Professor of Medical Jurisprudence in the University of Aberdeen. Edinburgh Medical Journal, April, 1882, page 865.

examined internally as well as inspected externally. Cases have been omitted from the review which from advanced decomposition or other causes did not show well-marked signs of death by drowning, or which presented other fatal injuries.

Of the external signs Dr. Ogston regards (1) the flowing of water, generally in abundance, from the mouth on turning the body, and (2) the presence of froth at the lips and nostrils, as the only ones which we can utilize as trustworthy indications of drowning. Other appearances on external inspection of the bodies of the drowned serve simply to strengthen these when they are present, and by themselves considered are individually of little value.

The following table gives the relative frequency with which these external appearances, both special and auxiliary, were found in the one hundred and seventy cases observed: —

EXTERNAL SIGNS OF DROWNING IN 170 CASES.

	Number of times observed.	Ratio per cent.
SPECIAL APPEARANCES.		
Water, sometimes frothy, flowing from the mouth on turning the body	24	14.1
White froth at the lips	34	20.0
White froth at the nostrils	22	12.9
Red froth at the lips	7	4.1
Red froth at the nostrils	14	8.2
AUXILIARY APPEARANCES.		
Bleaching of the hands and feet	141	82.9
Bleaching of the knees and elbows	45	26.4
Cholera hand	12	7.0
Pallor of surface of the body	67	39.4
Rosy patches on skin	90	52.9
Cutis anserina	106	62.3
Sand under the nails	5	2.9
Protrusion of the tongue	29	17.0
Erection of the penis [1]	13	16.6
Semi-erection of the penis [1]	42	58.3
Retraction of the penis [1]	17	23.6

[1] In 72 cases noted.

In studying the internal signs of drowning, while trusting again to the presence of water and froth in the body as the chief indication, we are assisted by the occasional presence in the respiratory tract of foreign substances, such as sand, sea-weed, and the like, by the fluidity of the blood, and by the usual signs of asphyxia. We have to look primarily for water in the air-passages; secondarily, in those cavities bordering on the lungs, especially when the body has lain in water some time; and, thirdly, in the digestive tract or its surrounding cavities. From the presence of white watery froth in abundance in the bronchi and trachea, and in a less degree in the œsophagus and stomach, we derive much trustworthy information, second only to that conveyed by the presence of water in those situations. That it is a watery froth, and not a mucous froth, as it is often erroneously described, may be shown by taking a little of it on the point of a knife and touching the bubbles with a needle, when they readily collapse, leaving only watery fluid; while if any trace of mucus were present it would then betray itself by the stringy residue that would be found along with the water.

To over-distention and perhaps rupture of the superficial air-cells of the lungs has been assigned a certain value; but apart from the more important œdema they have slight significance. The same remark is made by the author concerning the bulkiness and protrusion of the lungs which are observed on removing the sternum; when the lungs protruded in the author's cases water or watery fluid, often in great quantity, was found in the pleural cavities, and the protrusion was caused by the buoyant organs floating on its surface when the controlling pressure of the sternum was removed. [We cannot accept this explanation as true. — REP.]

While, in the majority of instances, the signs of asphyxia have been assumed to be the most striking appearances of the drowned, those of syncope were not of very rare occurrence in the cases observed by the author, while those of coma were seen more often than writers have generally conceded.

INTERNAL SIGNS OF DROWNING IN 130 CASES.

	Number of times observed.	Ratio per cent.
SPECIAL APPEARANCES.		
Water in the air-passages	85	65.3
Water in the minute bronchi and air-cells	101	77.6
Water in the œsophagus	19	14.6
Water in the stomach	97	74.6
Water in the pleural cavities	63	48.0
Water in the pericardium	22	16.9
Water in the peritoneal cavity	16	12.3
White watery froth in the mouth	24	18.4
White watery froth in the air-passages	87	66.9
White watery froth in the stomach	4	3.0
White watery froth in the pleural cavities	5	3.8
Sand in the air-passages	10	7.6
Sand in the œsophagus	1	0.7
Sand in the stomach	2	1.6
Sea-weed in the larynx	1	0.7
Sea-weed in the mouth	1	0.7
Over-distention of superficial air-cells	10	7.6
Rupture of air-cells	6	4.6
Bulkiness of the lungs	48	31.6
Protrusion of the lungs	9	6.9
Entire fluidity of blood in the heart	72	55.3
Partially clotted blood in the heart	36	27.6
AUXILIARY APPEARANCES.		
Blood in greatest amount in right heart	103	79.2
Blood in equal amount in both sides	17	13.0
Congestion of lungs	106	81.5
Congestion of liver, spleen, and kidneys	107	82.3
Redness of the trachea	24	18.4
Redness of the œsophagus	7	5.3
Congestion of the brain and its vessels	72	55.3
Pallor of the brain	6	4.6
OCCASIONAL APPEARANCES.		
A layer of blood under the scalp	10	7.6
Punctiform ecchymoses under scalp	7	5.3
Punctiform ecchymoses of pulmonary pleura	9	6.9
Punctiform ecchymoses on surface of heart	3	2.3
Punctiform ecchymoses on surface of spleen	2	1.6
Punctiform ecchymoses on surface of kidneys	1	0.7

The conclusions derived by the author from these data are: —

(1.) When an external examination only is allowed, if an abundance of water pours from the mouth when the body is turned face downwards, and if white watery froth is found at the mouth and nostrils, or if it may be made to issue from them on compressing the chest, we may be justified in giving an opinion as to the probability of drowning, especially when the accessory signs (rosy redness of the face and front of the chest, goose-skin, and bleaching and corrugation of the hands) are well marked; presuming always that no lethal injuries are seen on the body which would appear to have been inflicted before death, and no trace of corrosive action, etc., of poisons are observable about the lips, hands, or clothes; but, to justify one in giving a more positive opinion, he should have a detailed description of the locality in which, and the circumstances under which, the body was observed before it was removed to the place of its examination.

(2.) If a complete inspection of the body is permitted, we may give a more positive opinion when, in addition to the external appearances, we find water in marked quantity mixed with white watery froth in the lungs and stomach, and also, perhaps, a large quantity of watery fluid in the pleural cavities; when we find sand, sea-weed, and the like in the bronchi or trachea; when the lungs are bulky or protrude on removal of the sternum; and when the blood within the heart is wholly fluid, and, with these signs, there are marked appearances of asphyxia in the heart, lungs, liver, and brain.

ON LESIONS OF THE NECK IN HANGING.

Two contributions on this subject have appeared recently: one by Dr. Lesser, of Berlin,[1] the other by Professor Hofmann, of Vienna.[2]

Lesser notes the frequency of lesions of various parts of the neck in suicidal hanging. He has made a detailed table of the results of his autopsies upon fifty subjects, and it appears that in thirty-six of these he found other characteristic appearances than the groove produced by the cord; he mentions extravasations of blood in the soft parts, rupture of the inner coat of the carotids, fractures of the hyoid bone and of the larynx and ruptures of the cervical muscles. This latter injury was met with in eleven cases; the sterno-mastoid was the muscle chiefly involved; its rupture was never complete, and there was no hæmorrhage from its divided fibres. This absence of hæmorrhage, constant in the muscular ruptures, was frequently noted also in connection with fracture of the hyoid bone and of the larynx, and Lesser attributes it to compression of the wounded parts, his idea being that though the small vessels are divided they are closed by the pressure of the cord, and when the compression is discontinued by the removal of the cord after death the cessation of the circulation prevents any effusion of blood. In support of this theory two cases are cited in which, the cord having been loosened before the death occurred, extravasations were observed in the skin and subcutaneous cellular tissue on a level with the groove.

Hofmann confirms the frequency of the lesions which are described by Lesser, and which have not been mentioned by the majority of the classical authors. They have often been overlooked, precisely because they were not accompanied by any sanguineous effusion in the tissues of the neck. But Hofmann does not accept the explanation which Lesser gives of the absence of extravasations; he remarks that laceration of the vessels of the skin is difficult to admit on theoretical grounds when one remembers how often the integument remains unbroken after injuries which have seriously impaired the integrity of the subjacent parts. Lesser's observation that extravasations occur along the groove of the cord when the cord has been removed after the suspension and before the death has not been confirmed in a series of ten cases of suicide under these conditions in Hofmann's experience. With regard to other lesions in the deeper parts, Hofmann remarks that many of the fractures of the cornua of the hyoid bone and of the thyroid cartilage are produced indirectly by the tension of cord on the thyro-hyoid membrane, and he considers that these fractures are made during life and not by prolonged suspension after death has occurred. The absence of extravasations is explained by interruption of the circulation through pressure and complete obstruction of the carotids and jugulars by the cord. As the cord is usually found around the neck below the bifurcation of the carotids, the superior thyroid artery and vein do not permit any blood to pass through them; and the superior laryngeal and the hyoid branch of the lingual are often directly compressed.

In this connection mention may be made of some observations presented by Dr. Græme Hammond before the New York Medico-Legal Society.[3] After a review of various authorities on the subject of hanging and its attendant phenomena, Dr. Hammond described some original experiments undertaken to demonstrate the painlessness of death by suspension. With the assistance of two medical friends he submitted to the process of partial strangling in the following manner: While he sat in a chair a towel was passed around his neck, and the ends were twisted so as to produce forcible compression. One of the attendants attended to the towel while the other stood in front of the subject to watch his face and to make the necessary tests of the cessation of sensibility.

Dr. Hammond thus relates his experience: "I first noticed a sensation of warmth and tingling, beginning in the feet and quickly passing over the entire body; vision partially disappeared, but there was no appearance of any colored lights. My head felt as if about to burst, and there was a confused roaring in the ears, such as is heard when the ear is placed against the opening of a shell. I suffered no loss of consciousness, and was fully able to tell my friend whether I felt any pain from the knife-thrusts he was inflicting upon my hand. In one minute and twenty seconds from the commencement of the operation all sensibility was abolished. After a few minutes' rest a second trial was made in the same manner as before. This was followed by symptoms similar in character to those mentioned in the first attempt, except that sensibility ceased in fifty-five seconds. A stab with a knife sufficiently deep to draw blood was indicative of no sensation whatever."

From these observations on his own person, and from the writings of various authors, Dr. Hammond draws the conclusion that the "proper and orderly way to execute the law in the case of a person condemned to death by hanging is not to let him fall or to jerk him into the air, but to stand him on the ground or on a suitable platform and to adjust the noose carefully around the neck below the larynx; then he should be raised from the place where he is standing by pulling on the rope, which should pass over a pulley fixed to a beam above, and he should be allowed to hang thirty minutes. The rope should be soft and flexible (of cotton or flax), so as to fit closely to the neck. Carried out in this manner, an execution by hanging would be effectually and mercifully performed. The condemned man would undergo no physical or mental suffering from the moment the suspension began, and his life would be taken as speedily and with as much freedom from horrible events as the circumstances of the case would allow."

Of these things we may be positively sure, says the writer: that from the instant suspension takes place there is no sensibility to pain, and that the convulsions which ensue are no more evidence of pain than are the

[1] Ueber die localen Befunde beim Selbstmord durch Erhangen. Vierteljahrsch. für gerichtl. Med. 1881. N. F. xxxv.

[2] Zur Kenntniss der Befunde am halse von Erhangten, Wiener Med. Presse; Annales d'Hygiene et de Méd. Lég., May, 1882, page 457.

[3] New York Medical Record, October 14, 1882, page 426.

movements of a decapitated chicken; they are such as always ensue with insensibility when the blood-vessels of the neck and the trachea are suddenly closed.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

DECEMBER 13, 1882. Meeting called to order at eight o'clock by DR. GEORGE B. SHATTUCK, chairman.

DR. MORTON PRINCE read a paper entitled

THE TYPHOID EPIDEMICS OF THE LAST DECADE, AND THE NECESSITY OF COMPULSORY DISINFECTION,

which will be published in the JOURNAL.

At the conclusion of the paper, DR. H. I. BOWDITCH said that such a vigorous and outspoken plea for sanitary education and sanitary reform led him to feel new courage, and inspired fresh hopes. The able arguments presented, and the strong array of facts which were produced, should force conviction upon every listener, and be followed by a better appreciation of the value of sanitary work, and the necessity of strengthening the hands of those, who are striving to diffuse intelligence upon this momentous subject. The legislature should be petitioned to amend and enact laws which shall enable the health officers of the State, in both central and local boards to more fully and perfectly carry out the work of sanitary reform. Dr. Bowditch remarked that he was, at one time, connected with the State Board of Health, which endeavored to do good work in educating the people to an appreciation of the extreme dangers of filth pollution, and to other hygienic necessities. The action of the State authorities made it necessary for him to resign that position. At present, the State Board is powerless to carry on any sanitary work, and is burdened with other duties of a different nature. Boards of Health should be entirely independent of any other relation, and should devote their sole energies to the sanitary protection of the citizens; aided by such laws as may be required for the proper performance of this duty.

MR. ERNEST W. BOWDITCH said that he was very much interested in the paper, particularly in those portions relating to the diffusion of the typhoid infection by means of drinking water. Chicago has adopted the dangerous experiment of pouring its sewage into Lake Michigan, near the shore of the lake, and drawing its supply of drinking water from the same source, at a point only a few hundred feet distant. There would seem to be a constant danger to the health of the inhabitants from this cause, and an epidemic might break out at any time.

DR. E. A. W. HARLOW asked the distance to which surface pollution might extend so as to manifest itself by contamination of well supplies.

DR. PRINCE replied that this depends upon a variety of circumstances, such as character of soil, inclination of the surface or of the stratification of the soil, the nature of the subsoil, and the amount and character of the polluting material. Direct contamination of well water has been proved in distances of sixty to one hundred feet. One case is reported in which the poison traveled many hundred feet in a valley and contaminated the water of wells at a lower level. The epidemic at Lausen was very peculiar in this way. Here the infection passed under a mountain and appeared in the water supplying the village upon the other side. This fact was established by impregnating the water of the brook with coloring matter, which reappeared in the water issuing from the other side of the mountain, as well as by dissolving certain chemical substances in the brook, which were detected in the water supply of the village. This constitutes, perhaps, the most interesting and striking source of typhoid infection which has thus far been recorded.

DR. MARCY thought that this paper struck not only at the source and prevention of typhoid fever but of all germ diseases. We are now rewriting all our books in consequence of the knowledge which has been gained in the domain of infectious diseases, and the former limits of this class of diseases have been vastly enlarged, and may in the future be made to include many diseases not now supposed to be due to germ infection. As an example of this he mentioned a house in Blandford, Mass., situated at the foot of a decline of about twenty degrees, from a cemetery which was one fourth of a mile distant. This house has its water supply from a well, and has been the scene of repeated ravages of severe typhoidal and other febrile diseases.

Some years since he examined the village of Littleton, Mass., where an epidemic of typhoid had prevailed. The soil is a clayey loam with substratum, perhaps twenty feet below the surface, of clay. Surface drainage infiltrates to this almost impervious strata into which the wells for the household supply of water are sunk. There are on one street twenty houses which have been visited by typhoid fever, and the disease is constantly recurring. In every case where the disease had occurred, und indeed common to the whole town, the privy and the well were in close proximity to each other. In the present state of knowledge upon the subject of hygiene, we must believe that sanitary protection is necessary not only in typhoid fever, but in all diseases of an epidemic character. In twenty-eight States of our Union, laws have been passed looking to sanitary reforms and protective hygiene. In twenty-two States, laws calculated to regulate the practice of medicine have been passed. Massachusetts will certainly be recreant to her duty if she fails to keep fully abreast of the latest revelations of sanitary science, which must always constitute the most important protection to our people against the ravages of epidemic diseases. Physicians are at present more to be blamed than are the people, for the people depend upon the medical profession for instruction in matters of physical well being.

DR. J. H. MCCOLLOM. By far the greater number of cases of typhoid occurring in the city are those in which the disease has been acquired in the country, and is developed after returning to Boston. The disease is highly infectious, and is readily contracted in summer resorts, owing to the almost universal lack of sanitary knowledge, and the many conditions there present by which the poison may be disseminated among our peripatetic summer population.

The better class of patients are not only willing but are generally anxious to take every protective measure in typhoid fever, and disinfection of the discharges may be perfectly carried out in most cases. For this object a small quantity of sulphate of iron may be placed in the bed-pan, and after the dejection a small quantity of muriatic acid may be poured over the discharge, after

which hot water should be added before pouring into the water-closet.

DR. DURGIN said that typhoid should certainly be carefully disinfected, and at least half a dozen other diseases should be similarly treated. Physicians should realize more thoroughly than they do the grave necessity for these precautions, and then the public will soon learn to value the labors of sanitary reform. Boards of Health can accomplish but little without the coöperation of the medical profession. Over a year ago the origin of typhoid in Boston was made a subject of investigation by the Board of Health, and those investigations are still being carried on. Milk, water, and food, have all been subjected to examination as possible channels of infection, but as yet the results obtained are very meagre.

MR. PUTNAM asked if the ordinary water seal in traps is a sufficient protection against the infection of the air in dwellings from sewer gases. This question is one of great and increasing importance to architects and plumbers.

DR. PRINCE replied that recent experiments in Chicago show that a water seal may be traversed by gases without the aid of pressure. This was shown by means of a U-tube containing water. In one end of the tube was placed sulphuretted hydrogen gas, and in the other end were pieces of clean metallic lead. In a short time the surface of the lead was blackened by the action of the gas, which had passed through the water seal without the aid of pressure. Sterilized fluids were also infected by the passage of germs through the intervening water seal.

DR. G. B. SHATTUCK referred to the experiments and conclusions of Carmichael of Glasgow; his results indicate and support a different opinion.

In connection with the question of contagion DR. J. C. WARREN called attention to the work of French and German observers of the relations of bacteria to this disease.

Eberth has found a short bacillus in the mesenteric glands and spleen in a large number of cases of typhoid, and he noticed that the organisms in some cases were in an inverse proportion to the duration of the disease; but there were also a considerable number of cases in which he could find no organisms. Koch has found the same form of bacillus in all the internal organs in cases of typhoid; he has also seen other forms, namely, long bacilli and micrococci, but these latter he connects with sloughing ulcers of the intestine, finding them only in internal organs in the later stages of the disease. He does not yet feel authorized to speak definitely as to the pathogenic character of the short bacillus, as he also has failed to find it in about half the cases. Dr. Maragliano, of Genoa, has found organisms in the blood of typhoid patients during life. The blood was obtained by means of a hypodermic syringe, which was passed through the abdominal wall into the spleen. Blood was also taken from the tip of the finger with proper precautions. The examination of fifteen patients showed that at the height of the disease the blood of the general circulation contains micrococci and bacilli, the latter resembling both kinds mentioned above. During convalescence these organisms lessen in number, also when quinine was given in large doses they diminished greatly in number, or disappeared altogether. Both the long and short bacilli were obtained from this blood by the "fractional cultivation."

Dr. Warren reminded the members that there were other elements to be considered in the ætiology of typhoid beside that of contagion. The well-known tendency of the disease to reappear in waves of several years' duration, and then subside spontaneously, was familiar to hygienists. The State Board of Health of Connecticut had recently called attention to the subsidence of malaria in Connecticut and also in Massachusetts, where it had within a few years been reappearing coincidently with the return of typhoid.

Professor Ceri has come to the conclusion, as the result of his experiments with malarial germs and soils, that what he calls the *natural germs* of the soil are to be distinguished from the same variety when cultivated, which then have acquired a diminished power of resistance, both to the action of heat and quinine. These influences cause an arrest of the action of the germ without its destruction. The rise and fall of epidemics is said to be due to a gradual weakening of the organisms, caused by cultivation from individual to individual in the human system. The germs which have thus lost their infective power may, under favorable circumstances, regain that power by again becoming natural germs. Infected localities may become disinfected whenever favorable conditions, which are necessary to preserve the natural quality of the germ, cease to exist or are removed.

DR. MARCY alluded to the investigations of Sternberg, in which septic matter was introduced into the tissues of animals, and caused death by processes resembling in some cases the symptoms of typhoid.

DR. BOWDITCH spoke of the universal presence of bacteria in the mouths of healthy and cleanly persons. He showed these organisms to the late Professor Agassiz, who was disinclined to believe that they were ever to be found in the mouth unless there was disease present, until he discovered them in his own mouth. Only one case was examined in which they were not present, and in this case soap was used in cleansing the teeth after every meal. The patient was a young lady. Dr. Prince spoke of a virulent outbreak of typhoid from eating the flesh of an infected animal, which must therefore have been supposed to have been suffering from typhoid. This is a new and unexpected source of danger in this disease.

DR. MARCY mentioned the typhoid infection of drinking water from the bodies of those dead with this disease, by means of leaching from the cemetery to a well, which was located on a lower level, though some distance away. Thus it seems that the poison of typhoid is equally potent whether it be taken in bulk, with food, or in the form of a cold infusion, as instanced in the grave-yard pollution. The question at once arises as to what we shall do with the infected bodies of those dying with typhoid or other epidemic diseases, which seem to be able to affect the public health, even when buried in the earth. Here would seem to be a most important reason for advocating the cremation of the bodies of the dead, particularly in cases of infectious or epidemic diseases.

At this point DR. HAROLD WILLIAMS presented the following resolutions, which were unanimously adopted: —

Resolved: That in the opinion of this Society the history of the past ten years has shown that one great element in the causation and spread of typhoid fever lies in the diffusion of the poison by the intestinal discharges of persons sick with the fever; and this Society

recommends that these discharges be thoroughly disinfected in every case before being disposed of in the privies and sewers.

Resolved: That we, as members of this Society, pledge to the State Board of Health, Lunacy, and Charity, and to the Board of Health of this city, our moral support and hearty coöperation in carrying out whatever measures they may deem necessary for the prevention of typhoid fever and other contagious diseases.

Resolved: That as in the opinion of this Society the number of towns availing themselves of the present statute relating to the appointment of boards of health and health officers throughout the Commonwealth is much less than the public welfare demands, being much less than one half the whole number, this Society recommends to the Suffolk District Medical Society to memorialize the State Legislature for the enactment of such laws as are necessary for the prevention of disease, and to raise sanitary legislation to the present standard of sanitary science.

Resolved: That the secretary of this Section is hereby directed to present these resolutions to the Suffolk District Medical Society at its next meeting, with a request that a committee be appointed to take them into consideration.

MR. ERNEST W. BOWDITCH read a paper upon

THE SIPHONING OF SEWER TRAPS.

By means of a diagram it was shown that the ordinary form of trap which is supposed to form a protection against the entrance of sewer gas from the drains into dwellings is always unsafe, and often entirely useless. The most elaborate and best ventilated system of house fixtures do not in the least obviate or prevent this accident, so that it is liable to bring infection into the best built houses.

The cause of the unsafe condition of the sewer is the fact that the sole obstacle to the entrance of gas into the house fixtures usually consists of a so-called "running trap," which is supposed to effectually seal the pipe between the house and the main sewer or cesspool. The fact, however, is that the flow of water through the drain, particularly if a considerable quantity be discharged suddenly, tends to empty the trap by means of the suction produced by its passage through the farther portions of the drain, and thus an unobstructed channel is at once opened between the sewers and the dwellings connected with them. The proposed remedy is to place a ventilating tube in the drain, so adjusted as to communicate with the lowest part of the cavity of the trap, thus allowing gas within the drain to escape through this ventilator instead of backing up into the house system, and also allowing air to enter the drain when from any cause there may be suction toward the sewer, thus preserving the integrity of the seal between the house system and the sewer or cesspool.

DR. JAMES B. AYER presented a paper upon

DEATH FROM RUPTURE OF AN ANEURISM OF THE SPLENIC ARTERY.[1]

DR. E. G. CUTLER showed the organs exhibiting this interesting pathological condition, and described its more striking features.

Dr. Cutler also showed a peculiar concretion of a calcareous nature, which had been felt beneath the skin of the leg in a young lady, and which had recently been discharged by inflammation and ulceration. It was hard, of whitish color, and shaped much like the incisor tooth of a squirrel, except that it was thicker in proportion to its length.

In connection with the first specimen DR. PRINCE alluded to a case of aneurism of the cœliac axis, seen by him, in which the symptoms were very similar to those of the case reported in this paper.

DR. CUTLER said that he had previously made the autopsy of four similar cases.

The Section voted to present the volume of the Transactions of the Pathological Society of Philadelphia, lately received from that Society, to the Medical Library Association, where the former volumes of the Society's reports are already preserved.

Adjourned.

[1] See page 148 of this number of the JOURNAL.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

JANUARY 22, 1883. DR. CHARLES D. HOMANS presided.

A CASE OF TUBAL PREGNANCY.

DR. GANNETT showed the uterus and ovaries from a case of tubal pregnancy. The woman had been married two years. Her pregnancy began in November, and she enjoyed good health for eight weeks. In the right ovary and Fallopian tube was a clot the size of the fist. She lived eight hours after rupture, there being a quart and a half of blood lost, but no fresh peritonitis. The marks of old peritonitis from a former miscarriage existed.

CALCULUS OF BLADDER.

DR. GAY showed a calculus from the bladder. A first operation by Dr. Bigelow in May gave complete relief for a time. It is a question if the whole stone had been removed then, as a small piece is harder than the rest and may have been a nucleus.

OSTITIS AND ARTHRITIS.

A discussion on Ostitis and Arthritis was opened by Dr. Fifield.

DR. FIFIELD meant to speak to-night of arthritis, not in connection with rheumatism or gout, but with diseased bone, and secondary to that.

Of ostitis, he preferred to consider it as inflammation or disease of bone as a whole rather than in detail, as of periosteum, bone, or of the medulla.

Leaving aside for the moment inflammations of bone as produced by syphilitic or malignant disease, he would allude to Monsieur Gosselin's useful and scientific division of the inflammatory lesions of bone into traumatic and spontaneous ostitis. The traumatic again to be subdivided, so far at least as regards the long bones of the skeleton, into those in which the bone has been struck by an object which does not destroy, or perhaps greatly injure, the soft parts overlying it, "ostéite traumatique abritée," and those where the bone is exposed by division of soft parts or by removal of them, "ostéite traumatique exposée." Both these divisions lead up to hypertrophy, atrophy, or even to suppuration.

As to the first division, the speaker drew attention to the callus succeeding to fractured long bones, always to be recognized for a very long time, perhaps for life, whilst in the young child it could totally disappear.

Again to neuralgic pains following hyperostosis of bone, as in callus, rebellious to remedies.

In regard to the second division, compound injuries of bone, "ostéite traumatique exposée," the fat of bone is said to play an important part in this form of injury as well as in those sheltered from the air, fat emboli of the lung occurring in the latter, the change claimed by Klose, of Breslau, 1856, to take place in the latter and in the conversion of the fat of bone (oleine) into a fatty acid, which, together with other matters, effused blood, pus, etc., forms a toxic compound producing septicæmia.

M. Gosselin claims that in 1859 he set forth the same idea in regard to compound fractures of the tibia as contributing to the gloomy prognosis in this injury.

The second division of ostitis as set forth by M. Gosselin, namely, spontaneous ostitis, resolves itself mainly into a consideration of what has been spoken of variously as diffuse phlegmonous periostitis, ostitis of adolescence, meaning by this a period from the commencement of the second dentition to perhaps the twentieth year, and exceptionally much further on (the ostitis of newly-born children to be considered apart), osteomyelitis, acute necrosis, etc. All these our best authorities would unite under one name, acute ostitis. This ostitis, so far as the speaker knew, did not lead to hypertrophy of bone, to deformity from such hypertrophy, or even to atrophy, but was, as a rule, with some exceptions to be presently mentioned, connected with suppurative abscess as the leading symptom. It is this subject that has engaged so many famous pens, Chassaignac, Demme, Schutzenbergen, Boeckel, Krug-Buse, Vormsen, Hedoin, Giraldes, Lonnet, Ange, Morse, Gosselin, Klose, Gamet, Sezany, Roser, etc., etc. All these have written in regard to abscess connected unmistakably with diseased bone, bone to be felt or seen, bone discharging splinters or bone dust, almost all, or all in fact, occurring near the epiphyses of the long bones, mostly at the lower end of the femur.

To these Dr. Fifield would add a form of abscess, found especially in the latter situation, which might with truth be classed as a supraperiosteal inflammation. It appears frequently without pain and without œdema, but fluctuates, and an incision lets out either laudable, well-concocted pus or a large quantity of blood with but little pus floating with it. The finger pushed to the bottom of the wound reaches truly to the bone, but from which a velvety structure separates it. It is scarcely ever seen excepting in young people. Dr. Fifield cited a case seen in his hospital service this autumn. He had never known such abscesses to be followed by necrosis.

The exceptions to ostitis of adolescence, accompanied by abscess, should here precede our consideration of the general truth and rule. Nearly all the writers heretofore mentioned refer as a cause for these cases to the existence of the epiphyses of the long bones (I include here what may be called the long short bones, such as the metacarpal, metatarsal, and phalangeal bones): these epiphyses, by reason of their great nutrition and rapid growth, and their often exposed situation, predisposing them to irritation and inflammation, whether from interior errors or from outward injuries. Some of the writers prefer not to limit their theories to conditions of the epiphyseal cartilages, but include a thin layer of spongy or cancellated bone lying between the epiphysis and the diaphysis, notably Gamet, These de Paris, 1862, Osteo-periostite juxta-epiphysaire, Osteo-periostite dia-epiphysaire, by Sales.

Now it would seem from the observations of clinicians, of whom perhaps M. Gosselin is as famous as any, that the epiphyseal cartilages are the seat of inflammation of various degrees, from irritation to the most destructive and rapid manifestations of phlegmonous processes; that the predisposition to irritation and inflammation of epiphyseal cartilages, and their severity, varies in accordance with the end of the bone involved; that as it is at the lower extremity of a long bone, generally speaking, that growth takes place most rapidly; it is here that more frequent and greater phenomena of disease may be witnessed. It is from a knowledge of these things that the man of the clinic draws inferences which lead him to correct judgments and truthful prognostications in regard to certain cases placed before him. Thus a youth coming with a shortened limb, a more or less flexed and stiff knee, hip, or elbow, concerning which he can give no more information than a history of fever, pain, and tenderness, a confinement to bed, or needing the assistance of a stick, may have all these things as the effect of an irritation or subacute inflammation of an epiphyseal cartilage, giving rise to what is known as a plastic arthritis, known in French parlance as "arthrite de voisinage." Perhaps not even this has been produced, but such an increase of size of condyles as has prevented normal flexion, and almost brought about a sub-luxation. Such cases Dr. Fifield thought he had seen. One was that of a young girl, who had a very considerable enlargement of the inner condyle of the left humerus, preventing flexion, and exactly simulating the deformity left after a fracture. The case was afterwards shown by the parents to many surgeons, being careful not to divulge to each successive one the opinion of his predecessor. Nearly all pronounced that a fracture had taken place, and some even advised a suit for malpractice. At last Dr. Cheever was consulted and arrived at the same opinion as the first surgeon who saw the case, namely, that it was one of overgrowth of the condyle. The girl was an only child, had been most carefully watched both in-doors and out. The parents had no knowledge of a fall, neither could the child recollect or admit ever having had one. A second case had been brought to Dr. Fifield from the South Shore; in this instance the increased growth had been at the lower end of the femur.

Of the effect of diseases of the bones and epiphyses on the growth of the former, some observations of M. Ollier may not be without interest:—

First. Ostitis has different results upon the growth of bone, according to the part affected.

Second. The arrest of development in cases of juxta-epiphyseal ostitis is observed when the inflammation is situated altogether on the boundary line of the cartilage of conjunction, and attacks this cartilage. In the case of a patient whose radius had ceased to grow since the age of eleven years, after an attack of acute ostitis, the hand was thrown outwards towards the radial side by an increase in growth of the ulna. Two years after the commencement of the disease the radius was three centimetres shorter than that on the other side of the body. To arrest the progress of deformity M. Ollier destroyed the cartilage of conjunction at the inferior extremity of the diaphysis of the ulna. It was followed by complete success.

Roser says that he has seen in the thigh elongations

of many centimetres. More than once he has seen the tibia become elongated, whilst the fibula remained stationary, which brought about a tibio-peroneal dislocation. The same author has seen the ulna cease to grow, with the consequence of a dislocation upwards and forwards. When, on the contrary, the radius has ceased to grow, the lower extremity of the ulna is dislocated, and the hand takes well-marked abduction. He has moreover seen a remarkable elongation of the articular ligaments in the neighborhood of ostitis; an abnormal mobility resulted from this, which the author compares to the articulations of "Punch." Roser claims to have established the following facts: —

First. That what he calls osteomyelitis can bring about a premature disappearance of bone between the diaphysis and the epiphysis. Thenceforward all development of bone ceases.

Second. That when the inflammation does not appear at the epiphysis, but only in its neighborhood, it produces an exaggerated proliferation of bone in this place, and thence an elongation. We are indebted to Dr. William Hunt, of Philadelphia, for a practical application of this subject of different lengths of limbs to the relief of distressed practitioners, haunted by fears of suits at law for damages.

Another form of irritation or inflammation of an epiphyseal cartilage is that described by M. Gosselin as the "ostéite trochanterienne apyrétique," characterized by pain on pressure over the process, and lameness, often obliging patients to keep their beds, or to walk with crutches, during a year or two. Mistaken occasionally for true hip disease, and treated as such, it is perfectly recovered from, and perhaps an undeserved credit is gained for a cure of real disease of the joint.

Still another consequence of disease of the epiphyses, not resulting in suppuration, is that described by Ollier through his pupil, Poncet, entitled albuminous osteoperiostitis, namely, a collection of liquid below the periosteum, and situated near the extremity of a long bone. The liquid is said to be viscous, albuminous, transparent, sometimes green, sometimes colored with blood, sometimes mixed with drops of oil. The treatment is said to be best conducted by repeated punctures with a trocar or aspirator, followed by compression. We have no accurate knowledge of the prognosis, probably from the paucity of cases well observed.

Dr. Fifield spoke from his own observation of a case of disease of the cartilage of conjugation of the upper part of the tibia followed by suppuration of a very mild type, but producing a partial separation of the diaphysis from the epiphysis. Such instances are common enough in the services of the large hospitals of Europe, and are accompanied by extrusions of slivers of bone from time to time, sometimes producing, particularly when occurring at the inferior extremity of the tibia, slow inflammations of the ankle-joint, recovered from at length if the surgeon refrain from operating. In the case seen by Dr. Fifield the diaphysis of the tibia could be bent to and fro from the epiphysis. Amputation was talked of but never performed, and now the doctor occasionally meets the middle-aged man returning from his chopping of wood and hoeing of corn with a very useful leg. Dr. Fifield has not been able to find a record of a similar case where disjunction had proceeded so far and was yet recovered from. This form of disease is undoubtedly seen in the humerus, clavicle, wrist, and other parts.

We name here from memory the disease described by Professor Parrot, physician to the Hôpital des Enfants Assistés, the curious cases of disjunction of epiphysis from diaphysis in the newly born, whose helplessness of limb is sometimes attributed to paralysis rather than to its right cause. It has been principally observed by Professor Parrot on the skeletons of children who have died of congenital syphilis.

We now come to the part of our subject not yet cleared from the confusion which has hung about it since Chassaignac first described it in 1853, and who has been followed by many writers, chief amongst whom are Giraldes, Klose, of Breslau, and Gosselin; the terrible disease known under the various names of subperiosteal abscess, osteomyelitis, acute periostitis, osteo-epiphyseal periostitis, diffuse phlegmonous periostitis, osteomyelitis, ostéo-periostite juxta-epiphysaire, pseudo-rheumatismal inflammation of the bones and articulations. It was to a form or variety of this disease that Chassaignac gave the name of typhus or typhoid of bone, from the prominence of the symptoms of these diseases masking the real one, giving rise not only to errors of diagnosis, but to those of treatment.

Gosselin gives the symptoms as acceleration of pulse, elevation of temperature, thirst, dry tongue, intense headache, stupid appearance of face, want of appetite, delirium. At the same time, or twenty-four or thirty-six hours afterwards, pain is complained of in the limb or limbs about to be diseased, then deep and diffused swelling. These symptoms endure for periods varying from four to fifteen days. The swelling spreads, becomes less hard, but the skin is not reddened, then fluctuation is recognized, at first with difficulty, sometimes confined to one side of a limb, and sometimes surrounding the whole of it. Death is the usual result with the symptoms of pyæmia, but it is said not to be accompanied by the presence of metastatic abscesses in other parts. Recovery is said to take place occasionally, and to be followed by immense necroses.

Klose, of Breslau, in 1858, wrote an article on this disease under the title of Separation of the Epiphyses. He claims to have witnessed the separation of the epiphyses at the lower end of the femur, and the extrusion of the blackened necrosed ends of the diaphysis.

This form of disease the speaker had never seen, deriving all his knowledge from books, unless the following case, seen at the hospital, might be such an one: —

A. S., aged twenty years, entered hospital October 27, 1882. Had been sick two weeks then. She ran on with all the evidences of typhoid fever. On November 7th, thirteen days after admission, she had a chill at night, temperature rising to 104° F. She complained of pain in knees and back. Two days later another chill at night. Nothing found by examination to account for pain in knees. (Attention is here called to the name pseudo-rheumatismal inflammation of bones and articulations given to this disease by Roser.) On the 23d of November, ten days after first chill, some induration was noted in left thigh. Poulticed. On the 30th thigh swollen and tender. December 3d. Fluctuation. Incision, and a basin full of very offensive pus was removed. Cavity washed out with carbolic solution and drained. Four days later a counter-opening was made on inside of thigh, and the bone found denuded as far as the finger could reach. Fearing bleeding from the wound she was transferred

from medical to surgical side of hospital. She came under charge of Dr. Fifield. At this time no elevation of temperature was observed. Pus rapidly formed in the right thigh; a large quantity was removed by aspiration, then abscess cavity opened by knife; bone found perfectly bare as far as could be reached. Death. It is much to be regretted that no autopsy could be had.

It seemed to the speaker that scarce a better picture could be drawn of the disease than the one here presented. Chassaignac paints his in still more lurid and baleful colors. Here is his description: Headache, want of sleep, delirium. Sleeplessness exists in all cases, with children as well as with adults. Delirium belongs to all, with this peculiarity, namely, that it exists only at night. Diarrhœa. Loss of appetite. Thirst. Involuntary evacuations. Diarrhœa has usually come on about the thirteenth day. Dry tongue. Fuliginous teeth. Sloughs over sacrum. Diphtheritic patches in the mouth. The pains in the limbs are said to be awful in their severity, patients screaming with terror at the approach of the least contact. Dreading the knife, they fear even more the necessity of moving away from it.

When the abscesses are opened the pus has been seen to contain oil globules. Roser believed this to show that the medulla was inflamed, and that the oily globules of it passed through the bone in consequence of arterial pressure, citing the fact, if it be one, that water poured into the holes made by a trephine, or those existing in connection with necrosed bone cloacæ, became agitated by pulsations synchronous with those of the heart. Roser was shown cases where, although the pus contained oil globules, the medullary cavity contained none. Yet he held this to be an additional confirmation of his position. The oily globules and pus had passed through so quickly that none had, very naturally, been found when the cavity was opened. His pupil, Dr. Andrea, is said to have performed a curious experiment in this regard. He plunged a fresh tibia into water at 30° Réaumur, that the fat might become fluid. This done, he opened the medullary canal by sawing off the superior part of the diaphysis. Then on the inferior part he removed the periosteum over an extent equal to a five franc piece. He afterwards fitted a stick to the cavity. If the stick was forced rapidly up and down, one saw the drops of fat issue rapidly from the Haversian canals. If it was played slowly, then the oil escaped drop by drop. Some of these ostites, having their origin in epiphyseal cartilages contained within joints, may be accompanied from the commencement with the purulent arthrites that Chassaignac has told us developed themselves in such an insidious manner, and with such slowness, in contrast with the other symptoms. We remember with pride that our dear and regretted friend, the late T. B. Curtis, whose knowledge was all-reaching, used to insist on this origin of many cases of hip disease contrary to the contusion theory put forth by a New York surgeon as accounting for all. Boekel has cited two cases in adolescents, double coxalgias, ending in some days in diarthrosis (meaning by this, perhaps, a separation of the head from the neck of the bone), and of which the course resembled completely that of phlegmonous periostitis.

The treatment of such cases as have been described under the name of typhoid of bone consists, by the almost unanimous consent of all surgeons, in the making of early and free incisions into the affected part. Spillman, of Strasburg, wishes them to be made as soon as pus is suspected, before fluctuation is to be perceived, declaring that even if pus is not reached the operation will prevent the plastic products from being transformed into purulent matters. Billroth, on the contrary, wishes that they may be postponed until fluctuation be evident and the skin thinned. Martin Smith, of America, desires that the surgeon trephine the bone, but is frowned upon by the majority of writers. The treatment of Demme should be noticed here on account of the very brilliant results claimed by him. Impressed with the idea of purulent absorption after incisions (most surgeons have the same idea) Demme empties the abscess sac by trocar, and only in the second period of the disease, that is, when the fever falls, makes his incision with a cautery of hatchet shape. He pretends, says M. Spillman, of the Val de Grace, to have obtained thirteen cures in seventeen cases.

It is a singular fact, still unexplained, that although we may have equally large effusions of pus, equally extensive denudations of bone, yet the fatal typhoid element is not present, and cases are recovered from although bearing with them indelible traces of the conflict. Such cases, perhaps, are those seen where a bone such as the humerus or tibia is attacked. The whole bone seems to die at once and to separate itself from one epiphysis or from both. Such a case was that of Edie G., City Hospital, service of Dr. Fifield, where the whole shaft of the tibia was exposed by an incision going from one end of the bone to the other, then the diaphysis divided in the middle by a chain-saw. The lower half lay perfectly loose from its epiphysis and was lifted out, the other half was divided at a short distance from the upper epiphysis and lifted easily out of its bed. A new shaft rapidly formed, and last winter the child was seen skating. Giraldes gives two or three instances of this kind. One was a removal and regeneration of the shaft of the humerus. Another case seen at the hospital in the service of Dr. Fifield was that of a young boy affected in a similar way as Edie G., namely, sudden death of the shaft of the tibia. Whilst waiting for operation the other tibia was found to be dead, almost before it could have been suspected to be diseased, then the right femur was found bare and lying in a pool of pus. Death quickly followed.

The fingers and toes also afforded instances of ostitis. Not only those seen in connection with whitlow, but where the trouble seems to have its origin in the epiphyseal cartilages. Dr. Fifield here cited a hospital case which seemed to be of such origin. The speaker also said that the subsequent behavior of bone bared by slough and suppuration of soft parts above it appeared to depend a great deal upon situation, for instance, in the fingers. When the last phalanx is bared it is inevitably dead, and is cast out or removed by the surgeon. Most generally the same is true of the middle phalanx, but in the first phalanx it not unfrequently happens that although the bone be seen by the eye and felt by the probe to be bare, yet the phalanx will heal with a depressed cicatrix without any exfoliation from the bone. It is believed by some writers that in these cases the periosteum is adherent to the overlying muscles and is lifted up with them by suppuration from the bone, sustaining no actual loss excepting over the spot where the bone is found bare. This may also occur in other situations than those spoken of.

A brief allusion was made to rheumatic ostitis, lead-

ing to hypertrophy and irregular growth of bone, and yet where no true articular rheumatism had ever existed.

Dr. Fifield also spoke of abscess of bone, and said that the symptoms as given by Brodie were not always to be depended upon as pointing to pus in a cavity of bone. One had such wearing, constant pain, aggravated at night, in hypertrophy of bone merely, the bone being more solid than natural. Another might present a cavity without pus. Another would present the same evidences without any recognizable disease at all. The finding of pus was a mere piece of luck, one guessed at it but never diagnosticated it.

DR. CHEEVER referred to one or two cases illustrating some of Dr. Fifield's points. It has been said that disease of shaft and of the joint are different in adults. This is not always the case. A patient, otherwise in robust health, had pain in the shaft of the tibia. The periosteum was incised with partial relief only, and then the bone was trephined. Eight or nine years after this patient had the identical condition near the inner malleolus. Again he got temporary relief from incision, and he was again trephined with relief. This time, however, he did not recover. There were hectic, etc., and he was amputated above the knee, making a good recovery. Dissection showed an unusual course of disease. Disease of the shaft and of the epiphyses are not commonly found together. He also referred to a case where nodules as large as a lemon seed existed near the root of the thumb-nail, not extending through the skin. He cut them out rather than to amputate. The patient slowly healed, and went away, but some time after, while shaking a horse by the bridle, he hit his thumb, with the immediate result of ostitis of the thumb. This was a mixed case, cartilaginous, not enchondroma, but ostitis.

DR. WARREN spoke of Dr. Fifield's remarks on typhus in connection with the bacterial origin of disease, and contrasted the views of the older French surgeons on spontaneous pyæmia with those of the modern pathologists. He thinks it important for surgeons to recognize that bare bone in the fingers, as spoken of by Dr. Fifield, does not always mean loss of bone.

DR. CHEEVER, while feeling a reluctance in cutting into bone and letting out pus, but also getting venous hæmorrhage, believes that incisions generally do best. We do get septicæmia and death without any break of surface. He referred to a hospital case of fracture of the leg with unbroken skin, but in which the patient died, having had chills and other septic symptoms.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

C. M. JONES, SECRETARY.

DECEMBER 4, 1882. DR. H. W. WILLIAMS presided.

DR. C. H. WILLIAMS read the regular paper on the

TREATMENT OF DISEASES OF THE LACHRYMAL CANAL,

in which the use of probes of not more than two mm. in diameter was recommended, also injections and collyria of weak astringents, and in cases of purulent dacryo-cystitis the injection of iodoform, this being held in suspension in an equal weight of water long enough to be drawn up by the syringe and injected through the divided punctums.

The average of measurements of the bony lachrymal canal in two hundred skulls gave 4.75 mm. as the mean, the largest being 6.5 mm., and the smallest 3.25 mm.

Although the bony canal in most cases is large enough to take probes of four mm. in diameter, yet the soft parts fill up so much of the space, especially in inflammatory states, that the large probes could only be passed with considerable danger of injury.

DR. WADSWORTH said the subject had been very well presented by the reader, and he had little to add. The affection was certainly often a very obstinate one, and apparently little influenced by treatment; now and then patients got on very comfortably by the aid of one or two probings at an interval of months or years. On the other hand, cases of acute phlegmonous inflammation of the sac — those only, however, that begin in this way, for, as a rule, phlegmonous inflammation of the sac is preceded for some time by overflow of tears, showing obstruction of the canal — frequently recover very readily after the abscess is opened without any or with but little probing.

He agreed with the reader that in general it is better not to employ the hollow probe with Anel's syringe. But in some cases the hollow probe is of value, and he instanced a case in which the ordinary probe seemed to pass freely through the whole length of the canal, while the use of the hollow probe showed that there was a firm obstruction, probably bony, occluding its lower end.

Styles seem usually to do much more harm than good; still, patients are occasionally seen who assert they have been permanently relieved of their trouble after wearing a style for a year or two.

Dr. Wadsworth also referred to a case of sarcoma of the posterior nares, which had forced its way through the lachrymal bone and simulated a dilatation of the lachrymal sac, and to two cases of double lachrymal abscess occurring in children during convalescence from scarlet fever.

In reply to a question by Dr. J. B. Ayer, DR. WILLIAMS said that fluids of the affected sac, especially if purulent, were very irritating, and the patient should be directed to keep the fluids thoroughly pressed out one way or the other, though it is preferable, when possible, to force them down through the nostrils. As regards bony obstruction, out of more than two hundred skulls examined he had found only one case of bony exostosis, and in this the canal was entirely closed. The section of the canaliculus is generally ovoid rather than round.

DR. WADSWORTH said that in a skull in his possession the long diameter of the canaliculus was twice as great as the short diameter. He agreed with Dr. Williams in regard to the importance of keeping the sac empty, but patients should be cautioned not to use much force, otherwise the sac wall may be ruptured.

In answer to a question by Dr. Post, DR. WILLIAMS stated that absorption of the affected tissue does not take place under the treatment by probes. The passage is merely kept dilated for the time until the irritating cause is removed, and the parts enabled thereby to resume their normal functions. He further stated, in reply to Dr. Parks, that Bowman's probes have no definite scale of accurate measurements; No. 6 would correspond to nearly two mm. of Theobalt's probes.

DR. CABOT showed an instrument of his own contrivance, which combined an exploring needle with a director.

Recent Literature.

Studies in Pathological Anatomy. By FRANCIS DELAFIELD, M. D. Vol. I. Plates i.–xciii. New York: Wm. Wood, 1882.

This is the first completed volume of a series of publications originally issued in monthly parts.

As the title indicates, it is not a systematic treatise, but a collection of studies upon special subjects. The author states in the preface that he "has attempted to follow the purely objective method, to see and describe whatever could be made out in the different post-mortem lesions of disease. Such a plan involves following Nature wherever she may lead, and gives rise to apparent contradictions which cannot be reconciled."

For the general reader such a plan is certainly not advantageous, and the usefulness of the book is restricted to the comparatively small number of specialists, who can put their own interpretation upon the facts presented by the author, and can control his errors of observation by their own experience.

Profuse illustration is the necessary accompaniment of such a work, and that this has not been spared the ninety-three plates interspersed among one hundred and thirteen pages of text bear evidence. Nothing has appeared on this side of the Atlantic with so many and such handsome original plates.

The large size of the plates, however, adds nothing to their value for the individual reader, and at the same time they are not large enough to be seen at any great distance. No additional details are brought out by amplifying to 750 and 1500 diameters over what could have been obtained by using 400 to 500 diameters. For instance, no further information is gained as to the intimate structure of the giant cell depicted in Plate 48, than if it had been seen at one third of that size.

The subjects treated in this volume are the connective tissue, the pleura, the peritonæum, pneumonia, acute miliary tuberculosis, chronic pneumonia, phthisis, and acute phthisis.

It would lead too far to take up each of these in detail. In all there appears a mixture of the ideas of the older pathologists with those of the more modern schools, and the distinction of some of the subdivisions which has been made appears to be one rather of degree than of kind, and to depend more on clinical than anatomical grounds. For instance, the distinction between chronic pleurisy and the chronic pleurisy of phthisis rests essentially upon the way in which the fibrine and organized tissue are arranged relatively to each other, and which is hardly to be regarded as a constant characteristic.

Not much has been added to the general knowledge of the subject from the study of pneumonia, and phthisis and tuberculosis are at best a tangled skein.

The beauty of the letter-press and plates are certainly to be praised, but this character seems rather to add to the cost of the book than to its value.

Transactions of the Medical Association of the State of Missouri at its Twenty-fifth Annual Session, held at Hannibal, Mo., May 16–18, 1882. 220 pages.

This volume contains a series of papers of average interest and merit. The address of the president on Quacks and Quackery in Missouri is of considerable length, and is startling in its revelations of the ignorance and immorality of a large number of so-called physicians in that State, and of the very considerable loss of life that is to be traced to their malpractice throughout that quack-ridden State. It is to be hoped that the Association may be successful in its efforts to secure legislation which may put an end to such a disgraceful state of affairs.

Pathological Anatomy, Pathology, and Physical Diagnosis. A Series of Clinical Reports Comprising the Principal Diseases of the Human Body. By J. A. JEANCON, M. D. Cincinnati: Progress Publishing Company.

The prospectus is so worded that one expects to find new and original plates illustrating cases of the author. On opening the specimen number, one is surprised to find a very poorly executed reproduction of the plates, and a translation of the cases of the classical work of Cruveilhier. To this is added a few paragraphs on "The General Pathology of the Nervous Centre," taken apparently from Charcot and other French authors.

First Annual Report of the State Board of Health of the State of New Hampshire for the Fiscal Year ending April 30, 1882, with the Registration Report. 1881. 318 pages. Concord: State Printer. 1882.

This book contains not only the usual statistics of epidemic and other diseases, but a number of papers of more than average interest to readers outside the State of New Hampshire. Among these we may mention an article on Adulteration of Food, by Dr. E. J. Bartlett, associate professor of chemistry in Dartmouth College, and one on Water Pollution, Public and Private, by Dr. A. H. Crosby, of Concord. We notice incidentally that the entire expenses of the Board for the year amounted to only $1495.33, which was less than half the appropriation.

Early Aid in Injuries and Accidents. By DR. FRIEDRICH ESMARCH, Professor of Surgery at the University of Kiel, etc. Translated from the German by H. R. H. PRINCESS CHRISTIAN. Philadelphia: Henry C. Lea's Son & Co. 1883.

This little volume of so-called "Ambulance Lectures" is intended for the general public, but in no sense to take the place of a physician's services, merely to direct the right kind of aid before the doctor comes. The first lecture gives a brief outline of some anatomical points, having reference to common accidents. The subsequent ones treat of hæmorrhage, wounds, fractures, sprains, burns, drowning, poisoning, etc. The illustrious translator adds a preface to her country women, in which she says that the possibility of relieving suffering, and perhaps by timely assistance of even saving a life, should more than counterbalance the scruples that some might feel in entering on such a study. Of the soundness of the advice given for immediate treatment the name of the surgeon giving it is an abundant guarantee.

Medical and Surgical Journal.

THURSDAY, FEBRUARY 15, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

THE MEETING OF THE NEW YORK STATE MEDICAL SOCIETY AND ITS CODE OF ETHICS.

The New York State Medical Society, at its recent meeting, confirmed its action of last year with regard to the rejection of the Code of Ethics of the American Medical Association, and by a decisive vote refused to change the Provisional Code which it then adopted; a code which, under the name of the New York Code, has been generally discussed by the medical press, and almost without exception adversely. It will be remembered that it copies very closely the former Code, except that it encourages freedom in consultations, and makes up for it by being very stringent with regard to advertising, which seems like excusing sins we are inclined to by condemning those we have no mind to. This Code is called a provisional code, because its chief advocates, those who exerted themselves so actively in having it adopted by the Society, have now openly abandoned it, and have introduced an amendment, to be acted upon at the next meeting of the Society, abolishing this Code and substituting simply the formula that the only offenses for which a member can be disciplined shall be comprised under the heading of "conduct unbecoming a physician and a gentleman." Inasmuch as the law does not require a physician to be a gentleman, and since the abolition of the National Code of Ethics was chiefly urged because it established a standard above that of the law, and was therefore illegal, we do not see how the authors of this simplified Code can consistently support even this; it would seem that there can be no safe ground for them to occupy short of the abolition of all codes, in cases of disagreement invoking the protection of the courts. To this at last must all medical societies come, which, abandoning their own legitimate field, — the cultivation of medical science, and the promoting of mutual acquaintance and good-fellowship in the profession, — assume to legislate for the government of physicians, and to adopt political methods in their management.

It is apparently an unfortunate circumstance for the New York Society that its annual meetings have been held in Albany at the time when the Legislature is in session; the air being full of politics, the miasm has apparently infected the Society, and its recent sessions show it to be deteriorating from a medical society proper into a medico-political society, imbued with an ambition of becoming the medical legislature for the Empire State. It is not without significance in this connection that a committee was appointed to secure a room in the new Capitol for the future meetings of the Society.

The fact that the majority of the medical profession in the State of New York and more than two thirds of the county societies have expressed their disapproval of its action upon the Code of 1882, without influencing the action of the State Society this year, appears to demonstrate that this Society has ceased to be a representative body, and now asserts its right to act as a legal board of control by authority vested in it by its charter from the State. Those most active in the movement which has crippled the usefulness, and threatens the existence, of the Association, are almost entirely from the eastern part of the State, and the county society most distinguished in its advocacy of the measures adopted was the Society of the city of New York, although it is true that a petition signed by some of the oldest and most prominent members of the Society was presented in opposition to its action. It is greatly to be regretted, for the sake of harmony and good feeling, and the best interests of the Society, that the temperate and conciliatory course advocated in this petition was not followed. It recommended rescinding the obnoxious amendment which deprived the Society of its representation in the American Medical Association, and urged the sending of delegates to the next meeting of the Association instructed to ask for such modifications of the Code of 1847 as would meet the views of the medical profession generally. But this suggestion was treated with open disrespect by the new Code advocates.

There is one fallacy that should be pointed out which underlies the entire discussion: it is that the law makes the physician, and that the physician is an officer of the law. If this is granted then the closer our State societies can nestle under the wings of our State legislatures the better, for only in this way is to be obtained the necessary power to govern such a large body of sanitary police as we find in the American medical profession. But this cannot be granted, because it is not true. A physician in this country is a private citizen; he is recognized by the law, and responsible to it like other citizens, but he is not made a physician by legal enactment, nor is he a State officer, and if he is wise he does not wish special legislation, for experience has shown that whenever the profession has tinkered with the law it has been made to suffer for it in the end. The lesson also is so obvious that he who runs may read, that the more our societies confine themselves to their proper field, — the joint cultivation of medical science and good fellowship, — and the less they meddle with medical politics, the better it will be for their own future and the common good of the profession. Although the question will be again brought up next year in the action upon the several amendments that have been referred, it is hoped that a better sentiment will prevail, and that some course may be determined upon that will harmonize the views of the members, and that will commend itself to the judgment of all. If

there is any delegate who persistently interrupts the scientific labors of the Society by engendering disputes and ill feeling and efforts to divide the Society into factions he should be summarily dealt with; if necessary expelled for being guilty of "conduct unbecoming a physician and a gentleman."

The late meeting of the New York Society shows the effects of these disputes, it being confessedly unusually devoid of medical or scientific interest. The papers themselves represented almost exclusively the specialists of New York, who seem to have had control of the meeting in all its aspects; they were not attentively listened to, and discussion was conspicuous by its absence. The net result is to impress the mind with a sense of the predominance of the commercial over the professional or scientific elements of the practice and pursuit of medicine.

THE HOUNSLOW SUICIDE.

IT is long since any event of a personal nature has excited the interest at once of the public and of the medical profession in England, which has been called forth by the Hounslow affair. As the lessons of this tragedy are the same for both sides of the Atlantic, we think it worth while to lay before our readers the main facts in the case.

Dr. Edwardes, a young man, aged thirty-two, who had achieved a good name in London, as a medical assistant, entered into practice about fourteen months ago in Hounslow, a suburb of London, whose name suggests Dick Turpin and such folk, where he had purchased for £1800 a half-interest in the business of Dr. Whitmarsh, an established practitioner. Dr. Edwardes was a married man, of good presence and affable manners, and soon made a favorable impression in the town. He found, however, that the pecuniary returns which had been promised him were not forthcoming, and, while doing most of the hard work, he was making but a bare living, while his partner, with an office practice, was taking the greater part of the profits. Dr. Edwardes had repeatedly expressed to his wife that he was not being properly treated, and had regretted that they had not chosen some other place to begin life, but neither of them had made any public complaints. Things went on thus till some two months ago, when the doctor was called to visit a pretty, young, married woman, who was suffering from some thoracic affection, for which he examined her with the stethoscope. Directly after she told one of her neighbors that the doctor had taken liberties with her, and made improper proposals. Of course, the story once started spread like a pestilence, reaching the ears of the victim last. He met it with a prompt denial. Mrs. Whitmarsh, with exemplary delicacy, brought the story to Mrs. Edwardes, who showed her the door. Dr. Whitmarsh had mean time privately visited the patient, and had spoken very disparagingly of his partner. He however visited her with Edwardes, at the latter's request, on which occasion the woman gave a written retractation of her charges. In spite of this Whitmarsh advised Edwardes to leave the town, which he, of course, refused to do. New stories were started, which Edwardes was taking legal measures to punish, when the woman brought a counter suit. At this point Edwardes found that his partner not only refused to stand by him, but actually proposed to enter the witness box against him unless he would give up his practice and go away. An agent of Whitmarsh came to Edwardes, overwhelmed as the latter was by his misfortunes, to demand an immediate answer as to whether he would accept a small sum and retire from the field. Edwardes promised his answer that night. It was given by prussic acid. The unfortunate man was found dead, leaving a letter in which he gave the story of his wrongs, and ended with the words, "*May God curse Michael Whitmarsh.*"

Then the fickle public, who had merely been indulging in the harmless amusement of talking scandal, found out what they had been doing, and their attempt at reparation took a form which our English friends would probably say was much more likely to occur in an American mining-camp than in a quiet English village. The mob stoned the house of Whitmarsh and leveled his surgery to the ground. He and his family fled the town. The body of the unfortunate Edwardes was buried with honors that rarely have been given to a confessed suicide. The coroner's inquest, which has been made the occasion of a searching investigation into the circumstances of the affair, resulted in a verdict that Dr. Edwardes had died from prussic acid administered by his own hand during temporary insanity; and to this the jury added a very strong expression of their opinion that he had been driven to this act "by the pressure brought to bear by his partner, Dr. Whitmarsh, using the false charge of Mrs. Bignell as a means to drive him to a dishonorable dissolution of partnership." The town's people paid a marked tribute of respect to the young widow, who, it should be said, throughout the sad affair has maintained her husband's cause with the most steadfast loyalty. On the other hand, Whitmarsh and the woman who made the charges required the utmost exertions of the constabulary for their safe conduct to and from the court, where virtually unchecked displays of opinion occurred over and over again. In which particular again it would almost seem as if there were a good deal of human nature still left in England, and as if the machinery of legal processes did not always work so smoothly as our transatlantic contemporaries would have had us believe during the Guiteau trial. The principal witness adhered to the charge which she made, but on cross-examination allowed that she would not have done anything about it if it had not been for the instigation of Dr. Whitmarsh, who brought the lawyer to her. She also admitted having brought a similar charge against another man two years before, and acknowledged certain facts of her previous history bearing unfavorably on her moral character. A neighbor testified that on the day of the visit the woman told her with much pride and exultation that Dr. Edwardes had kissed her.

In a word, as far as the evidence went, it appears that whether or not Edwardes was indiscreet in his conduct, — and the circumstances are entirely against his having been so, — the accuser was at the best but a reckless tale-bearer, one who "casteth fire-brands, arrows, and death, and saith am I not in sport?" and in all probability was either a blackmailer or a tool in the hands of Whitmarsh. That gentleman, for his part, appears in the unenviable light of one who, having received a large sum of money, not only did not deliver the equivalent but sought to get rid of his dupe in order to have a clear field for repeating the transaction with another victim.

The ruin of this young man is the result of two causes; one, the coldness or rapacity of a fellow practitioner; the other, the scandal of a woman's tongue. On the first point we have little to say at the present time. For the credit of the profession we prefer to believe that such incidents are rare. There should be that *esprit de corps*. that practical exemplification of the golden rule, which, the moment a man is calumniously assailed, should bring to his aid the moral support of his professional neighbors. None of us knows when his own turn will come to be struck by the shafts of malice. One of the amenities of a profession that has many hardships is the promptness and heartiness with which neighborly aid and comfort are extended to those who, without intentional ill-doing, have fallen into trouble.

The other lesson to be drawn from this event is the need of a careful self-protection against the whims of the hysterical and the machinations of the vicious among our female patients.

The only adequate protection is in the presence of a third person in all professional visits, especially when anything of a physical examination is to be made. It is well known that surgical anæsthesia often develops erotic feelings, which may actually leave an impression on the patient of having had an objective source, and physicians know how to protect themselves. The fact that hysteria frequently causes a mental state in which the patient is hardly responsible either for the correctness of her conclusions or the truthfulness of her utterances is not so prominent in the minds of the profession. In such a case the lack of any symptoms of unsound mind may lend to her assertions great plausibility. An English barrister has said that he has known, on more than one occasion, a conviction in a court of law following such apparently straightforward statements of hysterical women, when subsequent developments proved the allegations to have been utterly without foundation. The *Lancet*, in a recent editorial, goes so far as to say that in all cases when charges of impropriety are brought against a medical man by young women the presumption should be against their truthfulness because of the frequency of hysteria, and the tendency in that disease to sexual aberrations. At all events it is obvious that the testimony of a third person, whose presence could generally be secured if insisted on, would be of great assistance to a man suffering under such a charge.

To most young physicians come times when they discuss, with Hamlet, the propriety of suicide, and wonder whether the canon of the Everlasting is really fixed against self-slaughter. Their professional training is not always the best preparation for meeting the ills of life. They know they are unable to judge impartially of their own bodily ills; the necessity of consultation in ills other than corporeal is not so universally appreciated. Dr. Edwardes seems to have made the mistake of brooding by himself over his misfortunes. A few hours in London with his friends would certainly have shown him that the accusation of a mischievous woman could not entirely destroy his character in the eyes of those who knew him best.

The expressions of confidence on the part of his friends cannot recall to life the unfortunate and oversensitive man, but they ought not to be without their lesson upon others whose lot seems beyond endurance. Those whose approval is best worth having, whose confidence is the result of intimate acquaintance, do not surrender their opinions at the idle talk of village gossips, though too often the unthinking and the malicious speak earliest and loudest.

THE WATER SUPPLY OF NEW YORK.

FOR some time past the water supply of New York has been the subject of investigation by a commission specially appointed to consider the matter. The conclusions at which they have arrived, which are interesting to a much larger number of people than are situated within reach of the Croton water system, are as follows:—

That the city requires an increased supply of pure, fresh water; that the work necessary for procuring such supply should be commenced as soon as proper legislation to secure prompt, efficient, and economical execution of this work can be provided; that the Croton water-shed will furnish a sufficient and the best supply for this generation; that the consideration of other sources of supply should be excluded except so far as these may become available hereafter as additions or extensions, and may affect the present construction of these works from the city to and at the basin; and that a new aqueduct should be commenced as soon as proper legislation can be secured.

Among those whose opinion was consulted during the investigation was President Chandler, of the Board of Health, who stated that there was an absolute necessity for more water, and that for a number of years the supply per capita had been rapidly diminishing. He was opposed to the use of water-meters, because the wealthy would be willing to pay for all the water they wanted, while the poor would probably stint themselves in the use of it if they had to pay for the quantity consumed. He said he had no faith in the use of salt water, which could only be introduced at an enormous expense, and could be employed only for washing the streets and putting out fires. It was not possible to get good, wholesome water from artesian or other wells on this island, and the present aqueduct could not supply the demand.

MEDICAL NOTES.

— The autopsy of Gambetta, conducted by some of the most eminent physicians and pathologists of France, showed the cause of death to have been perityphlitis and suppurative pericolitis. There were traces of old inflammation causing stricture of the small intestine at the junction with the ileo-cœcal valve. There was extensive infiltration of pus behind the colon and in the abdominal wall. The wound in the hand, which was popularly supposed to be the cause of death, was completely healed.

NEW YORK.

— Dr. Fordyce Barker having been elected President of the Academy of Medicine for the third time, delivered his third inaugural address at the stated meeting of the Academy held February 1st. During the course of it he mentioned that only twenty-four now remained of the one hundred and eighteen original founders of the Society thirty-six years ago, and at the conclusion of the address Dr. Detmold, one of the twenty-four, gave some interesting reminiscences of the early history of the Academy. The President then introduced Mr. Seymour Hayden, who was the guest of the evening, and who, after presenting his congratulations upon the flourishing condition of the Academy, made some remarks on the advantages of the study of art in connection with the practice of medicine and surgery. When he returned to his legitimate profession, he said, after studying art for two years in Italy, in consequence of a dissecting wound which broke down his health, he became fully convinced of the substantial value of art education to the practitioner. His idea was that in studying art the eye and hand became practiced to such an extent that the matter was of practical utility in the various departments of medicine and surgery. In England many medical men took the same view, and a number of surgeons there were also distinguished artists. Members of the medical profession, he thought, should be æsthetic as well as intellectual students. He believed in a return to the old days when physicians were the leaders of society, and that it was their place "to prescribe for the public, not the public for them." After remarks by Dr. Weir and others the Fellows adjourned to the supper room, where there was a substantial collation, and where they had been invited by the president and vice-presidents of the Academy to join with Mr. Hayden in the "loving cup."

— At the annual meeting of the Board of Managers of the New York Medical Mission, lately held at the rooms of the Young Men's Christian Association, Dr. Alfred C. Post was elected President, Drs. G. A. Sabine and William H. Thomson Vice-Presidents, and Dr. George D. Dowkoutt Medical Superintendent. The expenditures during 1882 amounted to more than $2000, and Dr. Dowkoutt reported that since the opening of the first dispensary, in June, 1881, 4002 cases had been treated at the dispensaries, and 2491 visits made to the sick in their homes. The object of the Mission is to combine religious instruction with the giving of free medical attendance to the poor, and two dispensaries are now maintained by it. It is proposed, if possible, to establish under its auspices an institute, on the model of one in Edinburgh, to train persons for service as medical missionaries in foreign countries.

— The wife of the late Dr. George M. Beard died eight days after the decease of the latter, and from the same cause, pneumonia.

Correspondence.

A LETTER FROM VALPARAISO.

MR. EDITOR, — It may be safely assumed that comparatively few people of our great American republic know what an Anglo-Saxon appearing city is in this busy port of industrious little Chili; but let me state right here that I use the word industrious only in comparing Chili with her sister Spanish-American republics. Valparaiso is the only place in all South America where the vigorous races of the hardy North have set the seal of advancing civilization, and in consequence science is getting a foothold, liberty of action and speech increasing, commerce rapidly developing, and the Jesuit and Dominican are preparing to move. The city was never regularly founded. In 1536 the port was first visited by the Spaniards, and a short time afterward a fishing and trading village gradually developed, till, in 1544, the Santiago government, recognizing the commercial importance of the place, declared it the official port of Santiago.

The city, the general form of which is that of an immense amphitheatre, lies in latitude 33° 2′ S., longitude 71° 45′ W., and consists of two distinctive portions: that upon the coast hills and intervening ravines, chiefly a place of residence, and a long narrow strip bordering the bay at the foot of the hills for several miles, where nearly all the business is done.

The bay is small, semicircular in form, and very deep. From the deck of a vessel in the harbor a splendid view can be had of a certainly picturesque city.

Why the name of *Val de Paraiso* (Vale of Paradise) should have been given to this place, I confess is a mystery to me. The hills are imposing, and may be even called grand, but they are barren and forbidding, and should the place be visited during the fury of a *norther* (a very probable thing in the winter season) paradise would be one's last thought. Taking it throughout the year, however, the climate of Valparaiso is a very mild one, closely resembling the coast climate of middle California. During the present year the highest temperature was only 84° F., in January, the lowest being 51° F., in June. The mean annual range was 62° F. The rainy season commences about the first of June and lasts till the end of September, during which time nine tenths of the annual rainfall occurs. Five inches fell in one day in August, the greatest fall of the year. Earthquakes are occasionally experienced here, the last one occurring July 8, 1872, when a number of severe shocks followed rapidly upon each other, extending forty miles inland, shaking down houses, and causing many fractures and contusions, though fortunately no deaths.

Until within the last eighteen months the water supply of the city was as bad as bad could be. The inhabitants were furnished with water chiefly by breakers carried on the backs of mules from the Salto River, eight

miles away, though a small amount was served to the dwellers on the hills from reservoirs filled during the rainy season. Nearly every house had a water tank holding several days' supply, but these tanks were seldom cleaned, and the system was utterly pernicious. The present water system has been in operation a year and a half, and is a blessing of inestimable value to the city. Water is brought eight miles from the Salto River to a reservoir on one of the hills, from which it is distributed to the lower part of the city. Eighteen hundred houses, containing ten thousand people, are thus supplied. Each house is estimated to contain five people, and as seven hundred and fifty gallons are allowed daily to every house, there is a *per capita* supply of one hundred and fifty gallons. This ratio far exceeds that of any European cities; and Glasgow, which has the largest supply in Great Britain, only gives a daily allowance of fifty gallons per inhabitant. As previously mentioned, only the lower portion of the city is supplied by the Salto water works, but I am informed that it is intended to extend the system to the hills as soon as practicable by means of stationary engines.

The disposal of the city sewage has been a problem of vital importance to the community for many years, growing more and more urgent as the population increased. The difficulty of getting water for efficient flushing prevented, however, the adoption of any modern system till the advent of the Salto works, when a private company contracted to build a proper system of sewers through the lower part of the city, maintaining itself for the present by heavy charges upon those who have drains placed in their houses, and thus relieving a criminally ignorant municipality from all responsibility and expense. The water and drain taxes have become so heavy that healthy houses are an expensive luxury, only to be indulged in by the wealthy.

Nearly all the hill dwellers use earth closets, and the brisk southwest winds blow all ill odors rapidly away; indeed, these winds are the salvation of the city.

The unhealthy season may be said to commence with the rains in June and terminate about a month later than they do. All diseases are greatly multiplied during these winter months, but especially is this true of the scourge of the country, small-pox. The average annual death-rate from small-pox in Valparaiso is 178, all these deaths occurring from June to December. The national authorities have become alarmed at the general spread of the disease, and have taken the matter in hand. An act was introduced into the last Congress making vaccination compulsory, but failed to pass. From the last year's report of the Secretary of the Interior I take the following extract: "During last autumn small-pox spread over all the country, and made numerous victims. It is still very prevalent and shows no signs of abating. In 1881 83,449 persons were vaccinated, and with the object of stimulating the public vaccinators an order was issued in November of last year entitling them to one dollar a day when called to a distance of upwards of four kilometres from their places of residence."

The majority of the practitioners here take little interest in their profession, only looking upon it as a means of gaining dollars and cents. There is no medical periodical published in the city, nor is there a semblance of a medical society. The licensed practitioners are numerous, and are about equally foreign and native, but the "by-ways" are not nearly so crowded as with us. Dr. Page, a Yale man, is the only specialist in the place. He finds time out of a large general practice to devote himself to ophthalmic surgery, and has a very respectable eye clinic.

The hospitals of Valparaiso are entirely unworthy a city of its pretensions. The *Hospital de la Caridad* is the municipal hospital, and is under the direction of the *Beneficencia* society, with a bishop at its head. It is situated at the extreme northern end of the city, against the foot-hills which rise to its rear. It is a large, rambling pile of buildings, constructed after no definite plan, additions having simply been made from time to time to meet the increasing demands of the city. The structures are mostly two storied, carelessly put up, badly ventilated, and miserably served. There are thirteen wards, with an aggregate capacity of six hundred and forty souls. These wards are apportioned, two for women, one for children, five for military patients, one for naval, and four for men generally, and contain from thirty to sixty beds each. The medical staff consists of eight members, each member being both physician and surgeon to his own wards. There is no such thing as alternation in service, neither is there a house-physician nor an interne, so after the usual morning visits the patients are left alone for twenty-four hours. The general service is by the Sisters of Charity. During 1881 there were 5164 patients admitted to this hospital, 3917 discharged, and 1157 died, giving a death-rate of one in 4.4, or over twenty per cent. Of these deaths 607 were from phthisis, one in 1.9, or over fifty per cent., which forcibly illustrates the terrible ravages of the disease in this mild climate. There were twenty-four deaths from hepatitis (probably hepatic abscesses), affording a striking evidence of the highly malarious character of the atmosphere. I was assured by Dr. Cooper, an old resident, that it was common practice here to plunge an aspirating needle into an inflamed liver in search of pus. Should an abscess be demonstrated, it is periodically evacuated till the cavity is obliterated. Should nothing be found, however, no harm is done, the perforation of the capsule often giving marked relief.

The English hospital is nothing more than a large private residence upon the Cerro Alegre, which has been diverted to its present use by Dr. Cooper, whose private property it is. The grounds of this institution are large, bright, and attractive, but the building is dark, depressing, illy arranged, and badly administered. Many radical alterations are necessary here, which are not likely to be made, for it is but natural to infer that a hospital cannot be run in the interests of its patients and be at the same time a remunerative investment to its proprietor. The building accommodates about seventy patients, but is rarely taxed to its full capacity. There were 531 admissions during 1881, 360 being maritime, 152 Chilians, and 19 charity cases. It will be seen from this that the chief support of the institution is maritime, Dr. Cooper having arranged with all the consulates, except the American and German, to receive merchant sailors at a given rate. The mortality for the past year was five per cent., a very good showing. In a private room I saw a case of recent ovariotomy. The patient, a Chilena, thirty-five years old, had had a multilocular cyst of the left ovary, which had been several times tapped. The operation was done by Dr. Cooper under antiseptic precautions, the usual median incision being made. Adhesions

were extensive, and much damage was necessarily done the peritonæum. The pedicle was clamped, and cauterized actually, having a cicatricial button after recovery. No peritonitis ensued, the temperature never getting above 99° F. I saw the patient on the sixteenth day after the operation, when she was walking about, and expected to leave the hospital on the following day.

The German Hospital is located just above the English, and like it is merely a private house, which has been converted into a garden hospital in this instance by a number of wealthy German residents of the city. There are only ten rooms, but the place is lovely, bright, clean, and cozy, and is ably administered by Dr. Thèle, of Berlin, who is also the only medical attendant.

. The mortality from all causes in Valparaiso during 1882 amounted to 5564, a death-rate of 46.3+ per 1000.

There are four cemeteries within the city limits, — three Catholic and one Protestant. They are all situated on the hill-tops, in excellent locations, but the three Catholic ones are administered after the usual pernicious manner of the Romish Church. The city regulations relating to burials are strict enough, and I am happy to say prevent street parades during the day. Those who are able to pay the burial fees of the church can bury their dead from six till ten in the morning, but these fees are far too exorbitant for the majority of the population to pay, who have to inter their dead between midnight and four in the morning. Poverty pursues its victims here even after death, for only the wealthy can afford to buy a lot from the church, and those of moderate means have to rent a grave for a year, after which time the priesthood causes the removal of the body to the *Playa Ancha* (potter's field). The vast majority of the dead, however, are simply carried to the Playa Ancha after midnight, and thrown into one of the open pits.

In concluding, let me call attention to the Protestant cemetery, which every American traveling in these parts should not fail to visit, for here he will see the monument erected a few years ago by the naval officers then in the Pacific, and the Rev. Dr. Trumbull, of Valparaiso, to the fifty-three dead heroes who fell in the Essex during her engagement with the Cherub and Phœbe in Valparaiso Bay, March 28, 1815, to whom honor has been thus tardily rendered.

Yours very truly,

ARTHUR C. HEFFENGER, M. D.,
Passed Assistant Surgeon, U. S. Navy.
U. S. S. LACKAWANNA.

Miscellany.

NEW YORK STATE BOARD OF HEALTH. RULINGS AS TO MIXTURES.

WE last week published a list of exemptions or standards that the New York State Board of Health had adopted under the Food and Drugs Act, then awaiting the approval of the governor.

These rulings have produced no little excitement among manufacturers and dealers of food products, and mainly because it is proposed to require that the proportions of each mixture be stated on the label. They hold that this is a needless interference with trade, and practically makes public the results obtained by experience, the benefits of which belong to the manufacturer.

So long as the adulterants are kept within the limit fixed by the Board, it is held that no public good is to be gained by the publication of proportions.

The English law recognizes this fact, and does not require that proportions shall be stated. We think it right that the label should guarantee that the amount of pure article required by the Board is present; also, that the names of the constituents should be stated, but not the relative proportions. In fact this is an important question, and we should like the views of our readers on it. We believe that some good can be accomplished by an avoidance of extreme measures, and that the Board should do all they can, consistent with their duty, to avoid unnecessary antagonisms. — *Sanitary Engineer.*

ANOTHER CASE OF BLACKMAIL.

APROPOS of our editorial on the Hounslow tragedy on another page, we may mention a somewhat similar case with more fortunate results, which has just received a judicial settlement at Toronto, and which we find described in the *Canada Lancet* for February. An action was brought by a man named Lumb against a medical practitioner of Toronto for having, as he alleged, been criminally intimate with his wife. The doctor had attended Mrs. Lumb in a miscarriage, which took place on the 26th of last June, and the plaintiff alleged that the act was committed on the 19th of July following, while the doctor was treating his wife in his professional capacity, and that she had confessed her guilt to him the same day of the occurrence. The plaintiff estimated the damages at $2000 for the loss of his wife's society and companionship through the trouble, although she still lived with him and took care of her four children. The plaintiff based his case on the evidence of his wife, who swore that the doctor took improper liberties with her, and the evidence of one of the children, a lad of ten years of age, who swore that he looked through the opening between the folding doors and saw the doctor leaning over his mother, and heard his mother say, "What will my husband say." On the part of the defendant evidence was produced to show that the folding doors could not have been open at the time, in fact had not been open for months. The wife's evidence was also shown to be contradictory in many important particulars. Medical evidence was produced to show the improbability that the defendant had connection with her at the time mentioned, twenty-three days after the miscarriage. Witnesses also testified that the character of the plaintiff and his wife was such that they would not believe them on their oath. The judge charged strongly in favor of the defendant, and pointed out that owing to a recent change in the law the evidence of a woman could now be taken in such cases as these, which opened the flood-gates to unlimited blackmailing. The jury, after an absence of less than ten minutes, returned into court with a verdict for the defendant.

Such a ruling and verdict are cause for satisfaction to all physicians as well as congratulation to the defendant, who was willing to incur the odium of publicity and the expense of a suit rather than pay the blackmail demanded.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 3, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	589	233	18.16	23.46	6.29	5.92	—
Philadelphia	846,984	417	125	22.32	8.64	6.72	2.16	3.80
Brooklyn	566,689	248	90	19.35	23.39	7.26	10.08	—
Chicago	503,304	—	—	—	—	—	—	—
Boston	362,535	158	56	17.72	14.54	6.96	1.99	—
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	230	94	46.44	4.30	8.17	3.01	29.67
Cincinnati	255,708	114	35	20.40	11.63	2.86	2.86	—
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	83	31	37.36	12.05	4.80	2.40	—
Pittsburg	156,381	78	—	26.88	10.24	8.96	1.28	2.56
Buffalo	155,137	42	12	26.18	7.14	9.52	9.52	—
Milwaukee	115,578	50	27	16.00	8.00	8.00	4.00	—
Providence (1883)	116,755	56	17	19.58	8.90	7.12	1.78	1.78
New Haven	62,882	34	12	21.92	19.88	2.94	2.94	—
Charleston	49,999	20	10	10.00	10.00	—	—	—
Nashville	43,461	23	8	17.36	17.36	—	—	17.36
Lowell	59,485	32	11	6.25	24.90	—	—	—
Worcester	58,295	12	5	—	25.00	—	—	—
Cambridge	52,740	24	8	8.32	16.64	—	—	—
Fall River	49,006	24	11	12.48	4.16	4.16	—	—
Lawrence	39,178	8	2	25.00	—	12.50	—	—
Lynn	38,284	12	3	8.33	24.99	—	—	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	11	1	—	—	—	—	—
New Bedford	26,875	—	—	—	—	—	—	—
Somerville	24,985	11	4	9.09	18.18	—	—	—
Holyoke	21,851	16	10	18.75	12.50	12.50	—	—
Chelsea	21,785	8	1	12.50	25.00	—	—	—
Taunton	21,213	7	3	—	—	—	—	—
Gloucester	19,329	2	1	—	—	—	—	—
Haverhill	18,475	4	2	—	—	—	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	3	1	33.33	—	—	—	—
Newburyport	13,537	5	0	—	—	—	—	—
Fitchburg	12,405	6	1	—	—	—	—	—
Malden	12,017	5	2	—	—	—	—	—
Twenty-two Massachusetts towns	157,041	72	13	18.07	6.95	4.17	4.17	—

Deaths reported 2404 (no reports from Chicago, St. Louis, and New Orleans): under five years of age 829: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 486, consumption 354, lung diseases 354, diphtheria and croup 150, small-pox 90, scarlet fever 80, typhoid fever 37, diarrhœal diseases 33, whooping-cough 28, measles 22, erysipelas 17, cerebro-spinal meningitis 13, puerperal fever nine, malarial fevers six. From *typhoid fever*, Philadelphia 13, New York six, Pittsburg four, Baltimore, and Cincinnati three each, Providence two, Boston, New Haven, Charleston, Nashville, Lawrence, and Somerville one each. From *diarrhœal diseases*, New York 14, Boston six, Baltimore three, Brooklyn, Cincinnati, Pittsburg, and Providence two each, District of Columbia, and Charleston, one each. From *whooping-cough*, New York 10, Pittsburg four, Cincinnati and New Haven three each, Boston two, Philadelphia, Buffalo, Milwaukee, Lowell, Chelsea, and Woburn one each. From *measles*, New York 12, Boston and Cincinnati three each, Hyde Park two, Brooklyn and Baltimore one each. From *erysipelas*, New York four, Baltimore three, Philadelphia and Brooklyn two each, Cincinnati, District of Columbia, Pittsburg, Buffalo, Milwaukee, and New Haven one each. From *cerebro-spinal meningitis*, Baltimore, Cambridge, Fall River, and Gardner two each, New York, Cincinnati, Lynn, Holyoke, and Weymouth one each. From *puerperal fever*, Boston two, New York, Cincinnati, Buffalo, Providence, New Haven, Brockton, and Gardner one each. From *malarial fevers*, New York five, Baltimore one.

One hundred and ninety-seven cases of small-pox were reported in Baltimore, Pittsburg one; diphtheria 33, scarlet fever 28, typhoid fever three, in Boston; scarlet fever 17 and diphtheria six in Milwaukee.

In 38 cities and towns of Massachusetts, with a population of 1,018,379 (population of the State 1,783,086), the total death-rate for the week was 20.78 against 20.32 and 19.79, for the previous two weeks.

In the 28 great towns of England and Wales, with an estimated population of 8,620,975, for the week ending January 20th, the death-rate was 23.4. Deaths reported 3862: acute diseases of the respiratory organs (London) 389, whooping-cough 97, scarlet fever 86, measles 82, fever 56, diarrhœa 40, diphtheria 22, small-pox (London three, Newcastle two, Nottingham and Derby one each) seven. The death-rates ranged from 13.9 in Cardiff to 31.4 in Manchester; Plymouth 16; Bristol 19.9; Birmingham 20.2; Brighton 21.1; London 21.9; Wolverhampton 22.9; Birkenhead 23.5; Sheffield 26; Hull 29; Leeds 30; Liverpool 30.7. In Edinburgh 23; Glasgow 30.4; Dublin 25.5.

For the week ending January 13th, in 169 German cities and towns, with an estimated population of 8,459,496, the death-rate was 25.8. Deaths reported 4199: under five years of age 1851; consumption 640, lung diseases 499, diphtheria and croup 215, diarrhœal diseases 146, scarlet fever 81, measles and röthein 51, whooping-cough 45, typhoid fever 42, puerperal fever 15, small-pox (Königsberg, Kiel, Heilbronn, Cologne, Rheydt, and Mainz one each) six. The death-rates ranged from 11.1 in Kassel to 40.1 in Chemnitz; Königsberg 35.1; Breslau 37.3; München 29.7; Dresden 22.2; Berlin 22.4; Leipzig 23.7; Hamburg 31.2; Cologne 23.4; Frankfort a. M. 19.7; Strasburg 27.3.

For the week ending January 20th, in the Swiss towns, population 494,390, there were 26 deaths from consumption, lung diseases 21, diarrhœal diseases 15, diphtheria and croup 12, typhoid fever five, scarlet fever one, whooping-cough one, erysipelas one. The death-rates were, at Geneva 9.2; Zurich 8; Basle 19.8; Berne 23.7.

The meteorological record for the week ending February 3d in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps:—

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
January–February, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration, Hrs. & Min.	Amount in inches.
Sun., 28	29.957	36	42	33	94	96	100	97	Calm	NE	NW	0	5	7	R	R	R	—	—
Mon., 29	31.033	32	36	31	90	85	95	90	NE	E	N	8	12	7	O	O	S	—	—
Tues., 30	30.225	31	42	27	83	76	90	83	NW	SE	S	6	7	4	O	C	O	—	—
Wed., 31	29.970	37	48	29	83	97	79	86	SE	SE	W	12	20	10	O	R	C	—	.88
Thurs., 1	30.194	27	36	16	73	56	83	71	SW	W	W	8	17	11	O	C	C	—	—
Fri., 2	30.674	25	32	16	63	53	64	60	W	W	S	8	12	3	F	O	S	—	—
Sat., 3	30.407	32	34	17	88	93	100	94	SE	E	NW	7	8	2	S	R	R	—	.47
Means, the week.	30.209	31						83										71.00	1.35

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF MEDICAL OFFICERS AND ACTING ASSISTANT SURGEONS OF THE UNITED STATES MARINE HOSPITAL SERVICE, WITH THEIR STATIONS. FEBRUARY 1, 1883.

MEDICAL OFFICERS.

Name, Rank, and Station.	Name, Rank, and Station.
Supervising Surgeon-General.	F. W. Mead, Port Townsend, W. T.
John B. Hamilton, Washington, D. C.	H. P. Cooke, Galveston, Texas.
Surgeons.	H. R. Carter, Memphis, Tenn.[2]
P. H. Bailhache, Washington, D. C.	W. H. Heath, Buffalo, N. Y.
John Vansant, San Francisco, Cal.	F. D. Porter, Charleston, S. C.
W. H. H. Hutton, Louisville, Ky.	*Assistant Surgeons.*
T. W. Miller, Chicago, Ill.	F. J. O'Connor, Detroit, Mich.
Walter Wyman, Baltimore, Md.	John Guitéras, Key West, Fla.
W. H. Long, Detroit, Mich.	W. A. Wheeler, Chicago, Ill.
R. D. Murray, Memphis, Tenn.[1]	J. A. Benson, Cairo, Ill.
C. S. D. Fessenden, St. Louis, Mo.	C. E. Banks, Portland, Oreg.
George Purviance, Boston, Mass.	D. A. Carmichael, Pittsburg, Pa.
H. W. Sawtelle, New York, N. Y.	S. T. Armstrong, New Orleans, La.
H. W. Austin, Cincinnati, Ohio.	P. H. Bennett, Boston, Mass.
J. M. Gassaway, Philadelphia, Pa.	C. T. Peckham, New York, N. Y.
Henry Smith, Norfolk, Va.	R. P. M. Ames, Evansville, Ind.
Passed Assistant Surgeons.	S. C. Devan, San Francisco, Cal.
G. W. Stoner, Portland, Maine.	F. M. Urquhart, St. Louis, Mo.
J. C. Fisher, Washington, D. C.	P. C. Kalloch, New York, N. Y.
John Godfrey, New Orleans, La.	H. W. Yemans, Sitka, Alaska.
C. B. Goldsborough, Mobile, Ala.	*Surgeon* (Retired).
Fairfax Irwin, Wilmington, N. C.	T. J. Griffiths, Louisville, Ky.[3]

[1] On leave. [2] Temporary.
[3] Consulting Surgeon, Louisville Marine Hospital.

ACTING ASSISTANT SURGEONS.

Name and Station.	Name and Station.
J. M. Allen, Milwaukee, Wis.	J. M. Kercheval, Nashville, Tenn.
W. A. Banks, Rockland, Me.	Samuel Kitchen, East Saginaw, Mich.
H. G. Bates, New Berne, N. C.	H. E. Mereness, Albany, N. Y.
B. F. Beebe, Cincinnati, Ohio.	J. D. Mitchell, Jacksonville, Fla.
A. D. Bevan, Chicago, Ill.	P. H. C. Noble, Richmond, Va.
R. D. Bibber, Bath, Maine.	Charles Ottille, La Crosse, Wis.
J. E. Bready, Dubuque, Iowa.	T. T. Price, Tuckerton, N. J.
J. B. Brewster, Plymouth, Mass.	S. D. Robbins, Vicksburg, Miss.
G. B. Case, Cleveland, Ohio.	S. H. Sears, Newport, R. I.
S. B. Conover, Philadelphia, Pa.	Elmer Small, Belfast, Maine.
W. A. Cox, Pascagoula, Miss.	W. N. Smart, Grand Haven, Mich.
Byron DeWitt, Oswego, N. Y.	A. E. Spohn, Corpus Christi, Texas.
A. W. Fisher, Toledo, Ohio.	J. G. Stanton, New London, Conn.
J. P. C. Foster, New Haven, Conn.	Theodore Starbuck, Fernandina, Fla.
T. L. Gelzer, Escanaba, Mich.	W. D. Stewart, Vineyard Haven, Mass.
L. P. Gibson, Little Rock, Ark.	J. M. Stuart, San Francisco, Cal.
A. H. Glennan, Baltimore, Md.	G. H. Stone, Savannah, Ga.
W. M. Griffiths, Louisville, Ky.	D. H. Strickland, Erie, Pa.
A. C. Hamlin, Bangor, Maine.	Joseph Taylor, Shreveport, La.
G. A. Harding, Sault Ste. Marie, Mich.	W. H Taylor, New Bedford, Mass.
W. H. Heard, Newport, Ark.	A. S. Tebbs, Marquette, Mich.
R. S. Herndon, Fredericksburg, Va.	J. H. Vandeman, Chattanooga, Tenn.
H. S. Hersey, Bismarck, Dak.	M. F. Wentworth, Portsmouth, N. H.
R. O. Hodges, Indianola, Texas.	C. A. Wheaton, St. Paul, Minn.
L. W. Hodgkins, Ellsworth, Maine.	R. C. White, Pensacola, Fla.
S. B. Hunter, Machias, Maine.	J. E. Wood, Elizabeth City, N. C.
R. W. Johnson, Baltimore, Md.	J. B. Cromley, Gallipolis, Ohio.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM FEBRUARY 2, 1883, TO FEBRUARY 9, 1883.

DELOFFRE, AUGUSTUS A., captain and assistant surgeon, will be relieved from duty in the Department of the Missouri, and report in person to the commanding general, Department of the East, for assignment to duty. Paragraph 3, S. O. 26, A. G. O., January 31, 1883.

ELBREY, FREDERICK W., captain and assistant surgeon. The leave of absence on surgeon's certificate of disability, granted July 21, 1882, is extended six months. Paragraph 5, S. O. 26, A. G. O., January 31, 1883.

NOMINATIONS. — The following gentlemen were nominated by Governor Butler as State Trustees of the Massachusetts General Hospital: Henry P. Kidder, Dr. C. V. Bemis (reappointed), Richard Olney, Dr. Henry G. Clark (instead of S. D. Warren and William Endicott, Jr.).

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the Society will be held at No. 19 Boylston Place, on Monday, February 19, 1883, at eight o'clock P. M. Reader, Dr. E. D. Spear. Subject, Otitis Media Purulenta.

C. M. JONES, *Secretary.*

SUFFOLK DISTRICT MEDICAL SOCIETY. SECTION FOR OBSTETRICS AND GYNÆCOLOGY. — There will be a meeting of this Section at 19 Boylston Place, on Wednesday, February 21st, at eight P. M. The following papers will be presented: Dr. O. W. Doe, A Case of Galactorrhœa. Dr. C. M. Green, The Delivery of the Second Fœtus in Labor with Twins.

J. B. SWIFT, *Secretary.*

BOOKS AND PAMPHLETS RECEIVED. — Seventeenth Report of the Board of Trustees of the Connecticut Hospital for the Insane. State of Connecticut. 1883.

Suicides in New York city during the Eleven Years ending December 31, 1880. By John T. Nagle, M. D. New York. (Reprint.) 1882.

Transactions of the Thirty-Sixth Annual Meeting of the Ohio State Medical Society. 1882. Columbus.

Papstykker til Chromatoptometrisk Tabel af Dr. Ole B. Bull. Pris pr. Par 18 Ore netto. (Uden denne Emballage tages intet Expl. tilbage.) P. T. Mallings Boghandel.

Primary Antiseptic Occlusion in Military Practice, with Cases from the Big-Dry-Wash Fight, near General's Spring, Arizona, July 17, 1882. By H. I. Raymond, A. M., M. D., U. S. A. (Reprint.)

Annual Address delivered before the American Academy of Medicine at Philadelphia, October 26, 1882. By Traill Green, A. M., M. D., President of the Academy. Philadelphia. 1883.

Second Annual Report of the State Board of Health of New York. Transmitted to the Governor February 8, 1882. Albany. 1883.

Lectures.

ON HYDROTHERAPEUTICS.[1]

BY PROFESSOR DUJARDIN-BEAUMETZ,

Member of the Academy of Medicine, Physician to the Hôpital St. Antoine, etc., Paris, France.

GENTLEMEN, — Applied from the earliest antiquity to the treatment of certain affections, cold water did not take its proper place among the resources of our profession till almost the very epoch in which we live. It was as a result of the efforts of a simple peasant, a kind of country quack, and not till after his empirical employment of the remedy, that scientific labors were undertaken to explain the effects, and to determine the indications of cold water applications.[2]

At Graefenburg, a village of Austrian Silesia, lived, at the commencement of this century, a certain Priessnitz, a very observing and intelligent man, who had noted the beneficial effects of cold water treatment on sick animals confided to his care.

Imagining that diseases impregnate a man as liquids do when they penetrate a sponge, he maintained that in order to cure them it sufficed to remove morbid impurities from the cutaneous surface by repeated bathings and the promotion of the excretory function of the skin. He therefore applied cold water to the treatment of the greater part of diseases, and modified successively the divers procedures of hydrotherapy which he put in practice. At first he employed sweatings followed by cold affusions, then advised wrapping the patient in a wet sheet, and, finally, cold baths. He obtained by this mode of treatment marvelous cures, which spread his fame far and wide.

Soon were seen flocking from all parts of Europe sick people seeking remedial aid from the healer of Graefenburg, and the village hovels disappeared to make way for numerous hotels, which soon became insufficient, so great was the number of patients, which kept increasing every day. Moved by this success, the Austrian government shortly appointed a commission which gave officially to Priessnitz the direction of the "hydropathic" establishment, which he had founded, and a few years after the institutor of hydrotherapeutics died crowned with fortune and with glory.

Such is the curious beginning of modern hydrotherapy, which, it will be seen, owed its popularity to the most gross empiricism. More recently the labors of Scoutteten, of Schedel, of Fleury, of Beni Barde, in France; of Chiapponi, in Italy; of Johnson, and of Manby Gully, in England; of Bell and Nicanor Rojas, in America; of Roser, of Lersch, of Pleniger, in Germany, have given a strictly scientific and medical character to the study of hydrotherapeutics, and it is from their contributions that I shall draw material for the several considerations into which I now enter.

PHYSIOLOGICAL ACTION OF COLD.

Numerous investigations have been made the last few years into the physiological action of cold, and of cold water in particular. I shall refer more especially to the valuable study of Winternitz.[3]

Whenever you apply a cold substance, such as ice or cold water, to any part of the body, you determine perturbations in the nervous system affecting the cerebro-spinal axis, and especially the great sympathetic. These phenomena are variable as the application of the refrigerant is of greater or less duration; if the chilling be of short duration, the tactile sensibility is at first augmented; if it be prolonged, all the modes of cutaneous sensibility disappear; a fact which has been utilized in the production of local anæsthesia for minor surgical operations. If, finally, you cease the refrigeration the sensibility, appears anew with a certain degree of hyperæsthesia.[4]

But the most profound modification, and that which effects the most happy results, from the stand-point of therapeutics, is the perturbation occasioned in the vasomotors. Under the influence of reflex action,[5] following cold water applications, the capillaries are seen to become constricted, the peripheral heat to diminish, the cutaneous secretion to cease, the skin to become pale, the muscular elements to contract, giving rise to the phenomenon known as *goose skin*; at the same time

[1] Translated from advance sheets by E. P. Hurd, M. D., of Newburyport, Mass., and now published for the first time.

[2] Hippocrates, in his treatise on "Air, Waters," etc., insists on the uses of cold water in the treatment of diseases. The Romans made great account of hydrotherapy, and a certain Charmis maintained that all diseases were curable by cold water alone. Celsus, Aretæus, Cœlius Aurelianus, all pronounced in favor of cold water medication, and recommended treating fevers by this means. Then it fell into desuetude till the seventeenth century.

In 1638 Louis Septala recommended cold douches; then a Belgian, Hermann Van der Heyden, employed them in all diseases, and Foyes, an Englishman, advocated hydrotherapy with great enthusiasm.

In 1712 appeared a dissertation by Frederic Hoffman, having for title, *De aqua medicina universali*, and showing the marvelous success which attends the therapeutic use of cold water; the system of treatment advocated spread rapidly in Germany.

In Great Britain, Wright, Gregory (of Edinburgh), and especially Currie, all of whom attempted a physiological explanation of the action of cold water, gave a powerful impulse toward the employment of this method.

In Italy, Giannini, Vallisnieri, Cocchi became partisans of hydrotherapy. [This was about the middle of the last century.] Pomme, who wrote in 1765, was about the only French exponent of the new method. Then comes the era of Priessnitz, who, early in this century, gave so great an impetus to the water treatment, and stimulated scientific inquiry, the results of which are seen in the numerous and able physiological treatises whose authors are mentioned in the text.

[3] Winternitz, Die Hydrotherapie auf Physiologischer und klinische Grundlage, Vienna, 1877.

[4] Cold raises, lowers, or abolishes the excitability of the sensory nerves, and Richardson has shown the modifications, varying according to the duration of the refrigeration. When the temperature of the skin is a little below 35° C. vascularization becomes more active, and sensibility more exquisite. When the integument is cooled still more, sensibility undergoes diminution, and at eight degrees below zero it is abolished altogether, to reappear as the temperature returns to the normal.

These modifications of temperature have been noted by Winternitz, and with the æsthesiometer of Sieveking by Helmholtz, by the determination of the quickness of our sensory impressions. From 36° C. to 38° C. this velocity is seventy-two metres a second; with lowering of the temperature it becomes ten times less.

These same modifications of sensibility are produced when the cooling body is applied to the trunk of a nerve of sensation, and these applications produce first hyperæsthesia, then a period of complete anæsthesia.

The experiments of Waller, of Rosenthal, of Eulenburg, of Weir Mitchell, etc., are very instructive and convincing. Richardson, "Action of Extreme Cold on the Nervous System," Medical Times, vol. ii., 1825. Winternitz, op. cit. Waller, On the Symptoms produced by the Application of Cold to the Sciatic Nerve. (Arch. Gén. de Méd., 5th series, vol. xx., p. 346, 1862.)

Eulenburg, Lehrbruch der Functionnellen Nervenkrankheiten, Berlin, 1871.

Weir Mitchell, Injuries of Nerves and their Consequences, Philadelphia, 1872.

[5] Edwards, Brown-Séquard and Tholozan, and Vulpian have shown that when the hand is plunged into cold water the temperature of the other hand is lowered or elevated. Brown-Séquard has, moreover, remarked that the reflex phenomena determined by local applications of cold to the skin are produced in a point symmetrical to that where the local application was made. Dumontpallier has quite recently insisted upon the study of the localization of the æsthesiogenous parts of the skin. Edwards, De l'Influence des Agents Physiques sur la Vie, Paris, 1824. Brown-Séquard and Tholozan, Recherches Experimentales sur quelques uns des Effets du Froid. (Arch. Gén. de Méd., 5th series, vol. xii., p. 683, 1858.) Dumontpallier, Leçons sur les Actions Reflexes. (Un. Méd., 1880.)

the heart's pulsations diminish, the arterial tension augments, as Delmas, of Bordeaux, has shown, and the patient experiences a general chill.

All these symptoms disappear with a rapidity proportioned to the duration of the exposure to the action of the cold. To this period succeeds another assemblage of symptoms to which has been given the name of reaction, a reaction which is characterized by manifestations of an opposite kind. The skin becomes red, animal heat is raised, the secretions augment, the muscular functions acquire a new energy, and a quite special sensation of *bien être* is experienced. It is in this double action on the nervous system that we must seek an explanation of the effects of hydrotherapy, whether considered as an antipyretic, a nerve tonic, or simply as a means of hygiene.

I will leave at one side for the present the antipyretic effects of cold water, to which I shall return when I shall speak of the treatment of fever by cold baths, and I shall at the present time limit myself to the effort to set clearly before you the results which may be obtained in nervous diseases from the double physiological action above mentioned.

ACTION ON THE NERVOUS SYSTEM.

In order that the functions of the nervous system may be accomplished in a regular manner, there must be not only complete integrity of all the constituent parts of that system, but it must receive a uniform and sufficient supply of normal arterial blood. When one of these conditions is at fault immediately modifications, more or less profound, in the nervous system result. This first fact being posited, we may immediately deduce consequences of the most positive kind from the stand-point of hydrotherapy, which acts on the nervous system, on the circulation, and on the nutrition.

On the nervous system by the sudden perturbation which it causes in the functioning of the sensory and motor nerve apparatus, hydrotherapy reëstablishes the regular operation of the cerebro-spinal axis; it, moreover, brings into exercise the vaso-motor centres, and thus produces an equilibrium between the functions of the brain and spine on the one hand, and the great sympathetic on the other. Moreover, it attenuates the exclusive action of certain local affections, which, by reason of reflex influences, become the point of departure of important secondary perturbations of the brain and spine.

By its action on the circulation, which it regulates and renders active, hydrotherapy still further modifies in a happy manner the functions of the brain and spine. Finally, by its general effects on nutrition,[1] by its direct or indirect action on the vaso-constrictors and vaso-dilators, on the secretory nerves, and lastly on the trophic nerves, cold water stimulates nutrition, promotes the regular play of the different organs, and becomes one of the most active agents of tonic and reconstituent medication. Under its influence the globules become richer in hæmoglobin, the oxygenation of the blood more active; and we ought to make a capital point of this fact in the treatment of diseases of the nervous system.

[1] Kund has experimented on the influence of cold in cases of poisoning by strychnia. Frogs poisoned by this medicament, he placed, some in water at 34° C., others in very cold water. The muscles of the former very speedily returned to their state of physiological relaxation, those of the latter, exposed to a low temperature, kept their tetanoid state a long time. The same experiments have been repeated in cats with like results. Kund, Gaz. Med., 1857.

Such is the veritable effect of hydrotherapeutics in nervous affections. I know that there has been much discussion as to whether the action of cold water were sedative, excitant, or perturbing. Some, with Trousseau, have pretended that cold water is the best of sedatives; others, as Fleury, have affirmed its excitant action; others, with Bloch, its perturbing action. These are, I opine, trivial questions, for according as you consider the effects of cold water during its application, or after its application, you observe opposite symptoms, and that it may be at one time perturbing, at another excitant or sedative.

MODES OF APPLICATION.

It is not enough to know the physiological or therapeutical effects of cold water, you must understand the conditions to be fulfilled in order to obtain the most favorable effects. I am, then, going to enter somewhat into details which I believe are of importance, for we have seen physicians prescribe hydrotherapy without insisting either on the mode of application, or on the duration of the douche, or on the temperature of the water. It is necessary, on the contrary, that you should carefully determine all these points in your directions, and that you should not leave, as is often done, to persons who are strangers to the healing art the management of the hydrotherapeutic treatment.

The means of application of cold water are numerous; these may be arranged in three distinct groups: In the one the water is delivered under high pressure, in the second there is no pressure, in the third the applications are made to the naked body by means of cloths or sponges. I shall then speak of three modes of application — douches, baths, and lotions.

DOUCHES.

Douches are by far the most employed. They are divided into a number of varieties, which depend on the apparatus by which they are administered. We have, then, the *douche en pluie*, or shower bath; the *douche à colonne*, in which a column of water is let fall upon the body; the *douche à lame concentrique*, in which three or more concentric streams are directed on some portion of the body surface; the *douche en nappe*, in which the water comes in sheets; the *douche en cercle*, in which a circle of jets plays upon the patient; the *douche en jet mobile*, in which a varying direction is given to the jets. I need not occupy much of your time with a consideration of these douches; you are familiar with them all. In the shower bath the douche is applied by means of a large globe sprinkler (*pomme d'arrosoir*); in the *douche à colonne* the water descends with some force by a circular opening; in the third variety the globe sprinkler, instead of being pierced with a multitude of holes, has several circular chinks through which the water pours; in the *douche en nappe* the watering globe has the form of a bell; in the *jet mobile* a tube of leather or caoutchouc enables one to give a varying direction to the stream. The most used of these douches are the *douche en pluie* and the *mobile jet* douche.

In general, the stronger the pressure of the water, the less painful the sensation of cold. At the same time care is needed in the management of the pressure, which, when too violent, produces painful traumatisms. In the shower bath the douche strikes more especially the upper part of the body, and you ought to avoid, save in exceptional cases, douching the head. As for

the *douches en jet* (the jet sprays), you can make use of different attachments which modify the form of the jet, and give the full jet or the broken jet, which may be directed, according to circumstances, on different parts of the body.

It remains for me to say what should be the temperature of the water, what ought to be the duration of the douche, what preparation the patient should make before, what he should do after, the douche.

As far as the temperature is concerned, the douche may be cold, it may be tempered, or it may be alternately cold and warm. The colder the douche the more intense the reaction, the more painful, too, the application of the douche. So in very susceptible subjects, and those who experience under the influence of cold a painful sensation of cardiac constriction and of suffocation, it is better to have recourse to tempered douches. In administering these douches a jet of cold water and a jet of hot water are turned by means of stop-cocks into the douche apparatus, and you can at your pleasure vary the temperature of the douche. Ordinarily at the commencement of the douche the water is tempered to 25° C. (77° F.), and is lowered during the douche so that finally it is not more than 10° C., or 15° C. (50° F. to 59° F.).

In the douches alternately hot and cold a much more active physiological reaction is obtained. In the so-called "Scotch douche" you begin with a douche of the temperature of 30° C. (86° F.), and gradually raise the temperature to 50° C. (122° F., which is about as hot as can be borne), then you give immediately a douche about as cold as ice. There is another kind of alternating douche in which a succession of warm and cold douches is given to the patient.

DURATION OF THE DOUCHE.

The douche ought always to be exceedingly short. You have just been told that the favorable results of hydrotherapeutics are due to a double action on the nervous system; to obtain this double action the impression of cold must be of short duration. As a general rule its duration should not exceed thirty seconds, and the first application of cold douches ought not to exceed ten or fifteen seconds.

PREPARATION FOR THE DOUCHE.

There are certain rules which should govern the patient before, during, and after, the douche. The greater the difference between the temperature of the body before the douche and that of the water, the more active the reaction will be. It has therefore been advised to cause the patient to take vigorous muscular exercise before the douche, in order to induce some degree of sweating. In our great gymnastic establishments, where the happy idea of douche compartments for the public benefit finds realization, it is at the moment of greatest muscular activity that the douche is taken.

This important condition, to have the skin in a state of perspiration, in order to derive from cold douches all their desirable effects, is little known, not only to the public, but also to physicians. Does not everybody in fact maintain that a cold bath taken when one is sweating is a bad thing, and that it is to this cause that are due the evil effects which sometimes follow the free external use of cold water? I believe this to be a complete mistake; and if we occasionally see congestions of the lungs follow a cold plunge, it is more probable that the individual was chilled before the bath was taken, than that the pulmonary congestion resulted from the bath.

Elsewhere we see, as a medicinal measure, a disposition manifested to favor as much as possible this state of sudation by exercise and artificial means. As artificial means, in Germany they make great use of the *dry blanket*, the patient being enveloped in several blankets thoroughly tucked around him, and kept in the hot, dry, sweating room, or subjected to a powerful vapor bath till a state of free perspiration is induced; then the wrappings are removed and a cold douche is administered, or he is immersed in a bath of cold water. The Russian bath, so much in use among a great many nations, and of which we possess in Paris a very complete establishment, the Hamman, is based entirely on this double action of heat and of cold water.

During the douche the patient ought, as Beni Barde recommends, to suppress, as much as possible, strong contractions of the muscles, and keep a firm hold of the bar for support. The respiratory distress is mitigated by freedom in outcries. In the event of congestive tendencies to the head or to the uterus, it is well to take a warm foot-bath, or douche the lower extremities with warm water, after the cold douche.

IMMERSIONS.

When remedial effects are sought from immersions, the patient either takes a single plunge into cold water, which should be of sufficient depth that the whole body may be immersed, then immediately rubs himself dry till the skin glows, or he remains several minutes in the bath; the latter course is recommended when an antipyretic effect is desired.

Partial baths are often beneficial, such as foot-baths, sitz-baths; those with running water, furnished with implements for local douching, are preferable.

AFFUSIONS AND PACKING IN THE WET SHEET.

Affusions consist in pouring cold water on the naked body of the patient, or in what is called the wet pack. Wrapping the patient in wet blankets is a very active hydrotherapeutic method. It has this advantage, that it may be employed in all places, and without having recourse to the quite complex apparatuses just described. It is, however, a painful application, and is by no means free from danger. The mode of procedure is simple enough: You wrap the patient in a sheet that has been wrung out of icy-cold water, — you may apply the wet sheet with the patient standing or lying, and keep him thus enveloped ten to fifteen seconds, — then with brisk rubbing with dry cloths you try to promote vigorous reaction. This envelopment may be partial; in this case it has been advised to leave the wrappings on during the entire period of reaction.

Such are in general the methods of application of cold water. There are other modes of using cold from a therapeutic point of view, and I shall now speak of applications of ice and pulverizations of ether.

It has been advised to treat certain neuroses by the application of ice the whole length of the vertebral column, and in England chorea is much treated by this method, and so is hysteria. Charcot has even attempted this method at the Salpêtrière, the ice being placed for the space of a half hour, then an hour, over the ovarian region in hysterical patients. By this mean she has observed a diminution in the number and intensity of the attacks.[1]

[1] Experiments have been made by Weir Mitchell, and by Richardson, to determine the direct action of cold on the spinal cord, the brain, and the cerebellum.

Cold destroys the vital properties of the cerebro-spinal axis when

A physician of Varsovie, Lublesky, has advised another means of producing refrigeration — the application of ether spray the whole length of the spinal column. He has thus treated chorea.

Such, gentlemen, are the divers applications of cold in the treatment of nervous diseases. In the next lecture I shall treat of electricity in the same affections; a subject much more complicated, and which will require much persevering study to master.

Original Articles.

TWO CASES OF COLOTOMY.[1]

BY J. COLLINS WARREN, M. D.

ALTHOUGH this operation is very frequently performed at the present time, it is not easy to obtain a description in the books which will serve the purpose of a useful guide to the surgeon who is about to undertake his first case of this kind. The best description in the English language is furnished by Allingham, so far as the writer is aware, and he is freely quoted by Bryant. A painstaking and accurate account is given by Koenig.[2] Allingham's rules are: to make an incision beginning one and one half inches to the left of the first spine below the last rib, and running five inches obliquely downwards and forwards across the space between the last rib and the crest of the ilium. Some writers content themselves with saying that the middle of the incision should correspond with the highest point of the *crista ilei*. The length of the incision is occasionally given as three inches. This is about the length of that drawn in Bourgery's plates of Amussat's operation. Packard, in the American edition of Holmes, considers this length sufficient. It is his custom, he informs me, to begin the incision at the depression made by the edge of the quadratus lumborum muscles. Inasmuch as the bowel lies at the edge of the muscle, this would bring the objective point near the beginning of the preliminary incision and not under the centre, as it should be. Moreover, some anatomists affirm that the depression supposed to be caused by the quadratus is really produced by other muscles. Allingham calls attention to the fact that it is sometimes quite difficult to find the bowel, and gives as a guide the direction to draw a line from the anterior to the posterior spinous processes, to extend a line vertically from a point one half inch behind the centre of this line, and it will be found to lie directly over the bowel. The bowel may be opened in the groin according to Littré's method, and modern surgery has deprived this operation of its principal danger, the opening of the peritonæum.

Another method of getting at the colon, described by Fine, consists in making a vertical incision from the eleventh rib to the crest of the ilium through the abdominal walls and opening the colon within the peritonæum.

The precaution sometimes given not to open the bowel in these operations until it has become glued to the lips of the incision seems hardly necessary.

The first case was that of a German girl, twenty-three years of age, who entered the Massachusetts General Hospital with symptoms of disease of the rectum of one year's standing. She was suffering great pain in defecation, and a digital examination showed the lower rectum to be almost completely obstructed by an indurated growth. The patient was etherized a few days later, and the constriction relieved by an incision which completely divided all tissues between the anus and coccyx, including the lining of the bowel and skin. Great relief followed, but in a week or two the symptoms of stricture returned, and it was found that the disease had already extended above the incision. Colotomy was performed on May 24th, Allingham's directions being carefully followed. The bowel was found without difficulty, was caught up by two loops of thread, and the incision stitched together around it. The colon was then opened, and after a very abundant fæcal discharge had taken place was stitched to the edges of the opening left for that purpose. The operation was done with antiseptic precautions, as a slight attack of erysipelas had followed the previous operation. Drainage tubes were inserted at each end of the incision, and a dressing of oakum folded in carbolized gauze was placed over the wound and changed as often as necessary. Except a slight erysipelatous blush lasting a few days recovery was uninterrupted, and the patient was discharged from the hospital June 24th, with the wound entirely healed. There was no inconvenience from leakage from the bowel, although occasionally a small amount of fæcal matter escaped with the morbid discharges from the rectum. There were two natural movements from the bowel daily, and there was complete relief from the previous suffering. During the summer the patient reported herself at the hospital. The movements continued to be well-formed and regular. The disease continued to progress, and she died on January 1st, having been obliged to resort to opiates only a few days before death.

Colotomy was performed in the second case for congenital absence of the rectum. The child, a patient of Dr. W. A. Dunn, was born two days before, and all attempts to open the bowel through the anal orifice were unavailing. The so-called paradox of M. Huguier occurring to my mind, namely, that in infants the sigmoid flexure is in the *right* groin,[3] I selected that position, found the distended bowel without difficulty, and evacuated a large amount of meconium, relieving the enormously distended abdomen. All symptoms were speedily relieved, the child nursed well, and the wound

it is too long applied. The first effect of chilling the cerebrum is a brief sedative action. Then phenomena of motor excitation are developed, sensibility is lessened, and if the application of cold is continued, the animal falls into a profound stupor, and surgical operations may be performed on him without the least movement. This state resembles the hibernal sleep.

When refrigerant applications are made over the cerebellum of birds, backward movements are produced of a very marked character, the explanation of which has not yet been satisfactorily given. According to some they are due to the cerebellum serving as counter-poise to the opto-striate bodies which contain the centres for backward movements. According to Richardson, the cerebellum is the seat of instigation of forward movements, and when its action is suppressed, backward movements take place.

When cold is applied to the medulla oblongata, the respiratory movements are first tumultuous, then they are slowed, and finally cease altogether. Bourneville, De l'Emploi de la Glace. (Progrès Médical, 1876.)

Weir Mitchell, Injuries of Nerves and their Consequences, Philadelphia, 1872.

Sur les Movements de recul Produits chez les Oiseaux par l'Application du Froid, etc. (Arch. de Physiol. norm et path., t. i., p. 477, 1868.)

Richardson, On the Application of Cold to the Cervical Region for the Reduction of Pyrexia. (Medical Times and Gazette, 21 March, 1874, pp. 312, 313.)

[1] Read before the Surgical Section of the Suffolk District Medical Society, January 3, 1883.

[2] Lehrbuch der Speciellen Chirurgie.

[3] American edition, Holmes's System of Surgery, vol. iii., p. 850.

healed without any indications of unusual inflammation. A progressive emaciation soon set in, which continued in spite of the baby's ability to nurse well, and death occurred on the fourteenth day. Unfortunately, Dr. Dunn was unable to procure an autopsy and settle the point whether the ascending or descending colon had been opened. Taking into consideration the fact that it has been shown that the position of the sigmoid flexure described by Huguier is found in a comparatively small percentage of cases, and that when the ascending colon is opened marked emaciation occurs, as has been pointed out by some writers, it seems quite possible that the ascending colon was opened in this instance, although the rapid and abundant discharge of fæces made it seem probable at the time of the operation that the opening had been made near the fundus of the cul-de-sac.

In looking up the literature of this subject after the operation, the proposition of McLeod struck me most favorably, and that is, to perform abdominal section when the rectum is wanting, free the end of the bowel from its connections, and, having emptied it, bring it down and stitch it to the anal opening. This is certainly a severe operation, but it seems to me preferable to all other alternatives.

The treatment of cancer of the rectum deserves a word in connection with the case first reported. In this neighborhood it has been the custom to adopt chiefly an expectant method, the stricture, if marked, being relieved by the passage of bougies; in England colotomy is almost universal; in Germany extirpation is largely resorted to. A linear division of the stricture, which I have performed in a number of cases, brings only temporary relief. A radical operation can, of course, only be attempted with reasonable hope of success in the earlier stages of the disease, but it is important to recognize the fact that the terrible suffering peculiar to cancer in this locality can be greatly relieved by an opening in the bowel at some point above.

NEPHROTOMY FOR HYDRONEPHROSIS. RECOVERY.[1]

BY A. T. CABOT, A. M., M. D.

Surgeon to Out-Patients in the Massachusetts General Hospital; Surgeon to Children's Hospital.

WILLIE H., aged ten, was admitted to the Children's Hospital, April 15, 1882, with the following history: Three months ago he fell down-stairs during an attack of dizziness. For two or three days he passed bloody urine. This soon stopped and he got rapidly better, and was able to be about, but was short of breath. Several weeks after the fall he noticed a swelling on his right side. This swelling has since steadily increased in size, but he has never had any pain nor discomfort from it.

The child is sallow and appears dull and listless. Dr. Watson, who first saw him in the out-patient department, found a prominent fluctuating tumor filling the right side of the abdomen and reaching to the median line. This tumor was dull on percussion; the dullness being continuous with the liver and kidney dullness, and reaching downwards to within an inch of the anterior superior spine of the ilium.

[1] Read before the Surgical Section of the Suffolk District Medical Society, January 3, 1883.

April 18th. Dr Langmaid etherized the child and introduced an aspirator needle into the tumor. He drew off forty-four fluid ounces of clear, slightly yellow fluid, which was analyzed, with the following result: specific gravity 1007; reaction alkaline; albumen one fourth per cent.; sugar absent. The sediment contained large, round cells, and signet ring cells, with red and white blood corpuscles in varying stages of destruction.

April 27th. The fluid had reaccumulated, and Dr. Langmaid again aspirated, obtaining several ounces of a fluid like the last, but tinged with red. This fluid was found to contain urea in small amount.

On May 1st, when I took charge of the wards, the tumor was again large and prominent, and fluctuation was distinctly felt from the abdominal surface through to a point just above the crest of the ilium behind.

May 6th. A consultation with the other surgeons of the staff was held, and incision and drainage of the sac was decided upon.

I accordingly made an incision vertically upwards from the crest of the ilium, along the outer edge of the quadratus lumborum. Upon cutting down carefully through the muscles the cyst wall came into view, and was incised and stitched to the skin. The finger passed into the cavity felt a soft, nodular mass, probably the kidney in the posterior part of the cyst. The ureter could not be detected.

Between two and three pints of amber-colored fluid escaped. A double drainage tube was inserted, and a Lister dressing applied, the operation having been done under spray with all antiseptic precautions.

The fluid was analyzed by Professor Wood, with the following result: reaction slightly acid; specific gravity 1008; indican present; urea present; chlorine present; uric acid present; albumen large trace. The sediment contained blood corpuscles, leucocytes, an occasional triple phosphate crystal, round cells resembling renal epithelium, and cylinders resembling hyaline casts.

May 7th. Recovered well from the ether. The temperature is 101° F., whereas after each of the aspirations it rose to a little above 103° F. The discharge is considerable, and the dressings are changed antiseptically.

May 8th. Quite restless last night, but has no pain. The urine is smoky in color, and the carbolic acid is discontinued, and liquor sod. chlorinatæ one part, water ten parts, is used in its place.

At this time, when the urine was dark, the watery fluid escaping from the wound colored the dressings a bluish-black appearance, just as the urine colored the cloths with which it came in contact. After the discontinuance of the carbolic acid the urine soon resumed its natural color.

The wound was dressed regularly, at first each day, later every second day, and the child continued to do well in every respect.

May 28th. An error of digestion sent the temperature to 104° F.; but on the following morning it again came down nearly to normal, as it had previously been.

The discharge, which was mainly watery, with very little purulent character, steadily diminished in amount. During May and June the boy was up and playing about the ward, and finally, June 14th (five and a half weeks after the operation), the tube was removed and the wound quickly closed.

June 19th. He went to the Convalescent Home at Wellesley, and on July 3d he finally went home with no sign of his former trouble, beyond the scar of the incision in the lumbar region. He has since been constantly heard from and has remained perfectly well.

The diagnosis in this case was tolerably certain.

The fall was followed immediately by bloody urine, and the gradually increasing tumor was noticed soon after this. The comparatively rapid growth of this tumor to a considerable size, with absence of pain and tenderness, and with perfect fluctuation felt over its whole surface, made its cystic character evident. The preceding hæmaturia strongly suggested the kidney as the seat of its origin. Finally, the character of the fluid removed, containing as it did urea, with but little albumen, placed the existence of hydronephrosis beyond question.

It is interesting to notice that at each withdrawal of fluid the amount of urea and other urinary constituents became more and more appreciable, while the albumen decidedly diminished in amount. This increase of urea has been previously observed in these cases, and is the natural result of relieving the pressure upon the kidney.

Also during the carbolism after the operation the urine flowing from the wound was similarly colored with that from the bladder. This shows that the kidney retained a very fair degree of activity, and that the ureter must have again become pervious before the fistula in the side closed, otherwise we should have had a reaccumulation of fluid.

A daily measure of the amount of urine passed was attempted, but could not be made exact, owing to an attack of diarrhœa, necessitating frequent use of the bed-pan when the sister in charge was not in the ward. We found, roughly however, that after the operation the urine gradually increased in amount, but remained always rather below normal.

The proper operative treatment of hydronephrosis is a recent and still unsettled surgical problem. The three methods of treatment which have been employed with more or less success are aspiration or tapping, removal of the kidney (nephrectomy), drainage by antiseptic incision (nephrotomy).

In Ziemssen's Cyclopædia of Medicine (American edition) Ebstein says, in regard to the treatment of hydronephrosis, that the results of the operative treatment of this disease are thus far not exactly encouraging, and as a general rule we shall be justified in having recourse to such means only when life is threatened. Further, he says that the puncture of hydronephrotic sacs is dangerous because an outbreak of peritonitis is always to be feared.

This opinion was expressed at a time when the importance of antiseptic methods was not appreciated, and in recent journals several cases are reported in which cures have been obtained by successive aspirations of the sac.

Hicks [1] and Croft [2] have each reported a case of cure after aspiration. Both the patients were boys (ages eleven and twelve), and the hydronephrosis was in both cases of traumatic origin. Three aspirations were required in one case, eight in the other.

Doe [3] has reported the case of a woman with a nodular stricture of the rectum, probably cancerous, with coincident hydronephrosis, in which, after two aspirations, the renal tumor did not reappear while the patient remained under observation.

The most distinguished advocate of the total extirpation of the kidney in these cases is Mr. Knowsley Thornton. He prefers the operation by abdominal incision, and uses that described by Langenbuch along the outer edge of the rectus muscle. By this incision he claims that the parts are much better exposed, and that the surgeon can advance understandingly to the enucleation of the tumor, whereas with the lumbar incision the space is small, and the operator is hampered in his movements.

In a clinical lecture reported in the *Medical Times and Gazette* of May 6, 1882, he says, "To sum up, then, I would recommend that the lumbar incision be used only for cases in which there is a strong suspicion that a calculus is present, and that the operation will end in nephrolithotomy; and I should be disposed in any case in which I had commenced by the lumbar incision and then found it necessary to complete the nephrectomy to do so by Langenbuch's incision, utilizing a portion of the already made lumbar incision for drainage, and closing the remainder."

"I would in all other cases, such as neoplasms of the kidney, hydronephrosis, pyonephrosis, and floating kidney, operate by abdominal section, making the incision along the outer edge of the rectus abdominis instead of in the median line."

Lastly, in regard to the treatment by incision and drainage.

Czerny, who read a very complete paper on the surgery of the kidney at the International Medical Congress, held in London two years ago, says that incision of the cyst and stitching the edges of the opening to the skin is the best plan in cases of fixed hydronephrosis, pyonephrosis, and echinococcus, while extirpation is indicated in cases of wounds of the kidney, floating kidney, pyonephrosis, calculous pyelitis, cysts, hydronephrosis, tumors, and fistulæ connected with the ureters *so soon as the life of the patient is endangered, and when other methods have proved ineffectual.* This, too, only provided the other kidney is healthy.

He advises nephrectomy by the abdominal incision when the kidney is movable; by the lumbar incision when it is fixed, and regards the lumbar incision as the safer operation.

Ultzmann,[4] after speaking unfavorably of the plan of total extirpation of the kidney, and of the treatment by puncture and the injection of iodine, says "the most advantageous method is, however, incision of the tumor, especially when done in Simon's method." This consisted in inserting four little trocars into the sac so that they inclosed between them a diamond-shaped space upon the abdominal wall. These were left in place some time in order that the slight inflammation caused by their presence might bring about an adhesion of the peritoneal surfaces; finally, an incision was made through the middle of the space inclosed by them, and the sac opened.

Kroner,[5] in the course of an article upon the surgery of the kidney, discusses the treatment of hydronephrosis by incision and drainage. He only succeeded in finding five reported cases, three of which proved fatal. He comes to the conclusion that it is impossible to secure the obliteration of the hydronephrotic sac.

[1] New York Medical Record, 1880, xvii., p. 424.
[2] Lancet, 1881, i., p. 138.
[3] Boston Medical and Surgical Journal, 1880, ciii., p. 274.
[4] Real Encyclopädie der Gesammten Heilkunde.
[5] Archiv f. Gynækol., 1881, xvii., p. 87.

If there be any bit of secreting tissue left this will, on relief from pressure, go on secreting urine. To find the orifice of the ureter and restore its potency is so difficult as to be practically impossible. Injection of the sac with iodine is fruitless.

Weir [1] has had two cases which he successfully treated and cured by antiseptic incision and drainage. Both of these patients were young men. In each of them a bougie was passed from the wound into the ureter until it met an obstruction, and was then found to be firmly grasped as by a stricture.

Peters [2] has operated upon one case in a woman of forty-seven. In this case a sinus remained at the end of a year, which, however, discharged but little. Antiseptic precautions were omitted after a few dressings.

Tuckwell [3] has reported a case in which he operated in a similar manner upon a child eleven years old, with congenital hydronephrosis. He obtained a perfect cure.

M. Le Dentu opened a hydronephrotic sac in the groin, but was later obliged to remove the organ by lumbar incision. His patient recovered.

The case reported at the head of this paper together with those which I have quoted above seem to indicate that in some cases at least the simple incision and drainage of the cyst is competent to work a cure.

By making the opening in the lumbar region the danger of peritonitis, against which Simon's method imperfectly guards, is avoided. The thinness of the cyst wall in my case would have made it a matter of considerable difficulty to keep the urine out of the peritoneal cavity had the operation of nephrectomy been attempted, and the restoration of the functions of the kidney shows that that operation would have unnecessarily removed a useful organ.

The fact that a hydronephrosis had a traumatic origin should, I think, encourage us to hope that by simply emptying the cyst, and giving the constricted portion of the ureter a complete rest from pressure a cure may be accomplished, and the calibre of the ureter may be restored.

Two of the cases of cure by aspiration which I have reported, as well as my case, were consequent upon an injury.

The immediate local effects of an injury (inflammation or hæmorrhage) may pass off, and yet the hydronephrosis once established persists. Something may be learned in this regard from the behavior of the urethra under somewhat similar circumstances.

A moderate stricture of the urethra or an enlarged prostate may allow a sufficiently free passage of urine. An occasion arises when an accident of circumstance prevents the passage of urine when the bladder is full and it becomes over-distended; complete retention is the result. This is a not uncommon experience, and that the urethra becomes again pervious when, by aspiration or puncture, the urine is drawn off and the pressure relieved is well known.

We should, therefore, I think, in hydronephrosis of recent origin, particularly when it depends on traumatic causes, expect that in a fair proportion of cases, after aspiration or incision in the loin, the relief from pressure will allow the ureter to recover its calibre.

If aspiration is not followed by high fever or other unpleasant symptoms it may be repeated a number of times. One case of recovery after eight aspirations is reported. When, however, as in the case which I have reported, the aspirations are followed by considerable fever, when the cyst rapidly refills, and the patient loses rather than gains ground, an antiseptic incision is, I think, called for.

[1] New York Medical Record, 1880, xvii., 294, and 1882, xxi., 477.
[2] New York Medical Record, 1882, xxi., 477.
[3] London Lancet, 1882, ii., 141.

SOME TYPHOID EPIDEMICS OF THE PAST DECADE, AND THE NECESSITY OF COMPULSORY DISINFECTION.[4]

BY MORTON PRINCE, M. D.,
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MY object in presenting this paper to your notice is to advocate the adoption of measures which I believe offer a fair promise of diminishing the frequency of typhoid fever, and especially of preventing the occurrence in the future of those widespread epidemics which have proved so disastrous to whole communities in the past. These measures are nothing new; they are familiar to us all. It is to the necessity of their rigid employment that I wish to call attention; "an ounce of prevention is worth a pound of cure," and if there be any practicable means at our command, which holds out any reasonable promise of diminishing the number of cases of typhoid fever in any appreciable degree, it is not only our duty to employ it, but I believe it to be the duty of the government to see that it is employed. Whether there is reason to believe that we have such a means I propose now to consider.

As every one knows, there are two theories as to the origin of typhoid. The one, originally proposed by Budd, maintains that the active principle of typhoid fever is a specific poison, which can only arise from a preceding case of the fever, and never *de novo*. No matter how much filth may be introduced into the system, it can never give rise to typhoid, unless the specific poison be present in addition. As Leibermeister puts it, no matter how well you manure your fields, unless you sow the seed you cannot reap one beard of wheat, and this poison (germs, if you will,) of typhoid, like the grains of wheat, though it may require a soil of decomposing, organic matter for its growth, can never itself be produced by anything but preëxisting typhoid poison.

According to the second theory, although the poison, which has been introduced into the system, *may be* transmitted from some preceding case, it also may arise spontaneously or *de novo* from decomposing, organic matter.

Now it will be noticed that there is one thing common to both theories, and that is, that typhoid fever may be produced by the poison generated in one case being introduced (though possibly only after having undergone secondary transformation) into the system of another. In other words, it is *possible* for one case to infect more or less directly another case.

However strong may be the evidence in favor of the spontaneous origin of typhoid, the evidence is equally strong in favor of its being transmitted from one person to another *under certain conditions*. These conditions require the poison contained in the intestinal discharges to be introduced into the system by one way or another, as, for example, by water, by air or milk. There are those who hold that typhoid can only arise by infection from a preceding case in this way. This,

[4] Read December 17th before the Suffolk District Medical Society.

I think, must be considered at present unproven. Though the possibility of its being true must be admitted. It is a question, however, which is beyond my purpose to consider here, as I propose to deal only with reasonably well-established facts; and one of these facts is that typhoid can be transmitted from one person to another, though perhaps indirectly. The occurrence of outbreaks of this fever has been too often associated with the pollution of drinking water and of milk, with the intestinal discharges of previous cases, to allow of explanation through the theory of mere coincidence. So far as we know, the only way by which the contagium is conveyed is by means of the intestinal discharges. The practical question for us, as sanitarians, is, How often is the poison transmitted in this manner? How many cases can be shown to have been infected by preceding cases? For if the number be small, no prophylactic measures looking to disinfection as a remedy will be of benefit; if the number be large, we shall be justified in employing such means as will insure us against the dangers of contagion. It stands to reason that whatever cases are annually caused in this way would not occur if the poison were thoroughly destroyed when generated in every case; and if the number be considerable it would clearly become the duty of the government, municipal or State, to see that this precaution is taken. Now what are the data which can be utilized for this purpose?

Unfortunately we are met with difficulties at the very beginning. Not only is it impossible to trace endemic cases in most instances to their sources, but even when this is attempted and successfully done, the results are rarely published; and especially is this the case in large towns, where the surrounding conditions are most complex, and a different focus of infection exists for nearly every case. The time and labor requisite for the investigation of such cases would be so great as to render any such attempt impracticable.

It is only when the number occurring in any one locality reaches such proportions as to constitute an epidemic and to cause alarm that attention is attracted to the danger and thorough investigation is made. It is often then found that a large number, if not all, the cases can be traced to one focus of infection. Accordingly it is only such instances which can serve us in solving the problem we have undertaken. But it may be safely concluded that the same law holds good for the one class of cases as for the other, and if the instances shall be found to be numerous where epidemic cases are due to infection from a preceding case, it may be concluded that endemic cases of similar origin are of equal frequency, to say nothing of the danger to which communities are exposed from epidemics.

In searching the medical literature for data I have confined myself principally to English sources for several reasons.

In the first place, for the proper investigation of the causation of disease there is required suitable sanitary machinery, such as does not obtain in this country, but is to be found in England, where every district, I believe, has its health officer or expert medical inspectors. The reports of these officers are always published, and consequently the results easily obtained. Then, again, widespread epidemics are not as frequent in this country as in England, if one can judge from the little information at hand. On this we are to be congratulated, but no one knows how long this immunity, if it is an immunity, will last. Information on the occurrence of epidemics with us is too scanty, and difficult of access for use. In English literature we have an *embarras de richesse*. When, however, I have accidentally come across an account of an epidemic occurring elsewhere I have occasionally noted it. The list is a long one, and the time at my disposal will allow me to give in detail only a few of the most noted epidemics. These will serve as examples of the manner in which typhoid may be propagated.

The first I have to relate is an exception, and did not occur in England, but it is so striking in its details and in the skillful manner in which it was investigated that I cannot forbear to relate it.

CASE I. In the summer of 1872, in the neighborhood of the little Swiss village of Lansen, consisting of only seven hundred and eighty inhabitants, there occurred in a farm-house, situated about a mile from the town, and separated from it by a mountain, a case of typhoid fever. This case was followed by three others in the same house. The physician in charge directed that the discharges be disinfected and buried. This warning was heedlessly neglected, and they were thrown into the privy and upon a dunghill without disinfection. As a result the poison was washed into a brook which helped feed, by a subterranean passage running under the mountain, the spring supplying the town. An epidemic broke out, and within the first three weeks one hundred of the inhabitants were attacked. Before it ceased 137 persons fell ill, or seventeen per cent. of the population.

CASE II. In 1879 the water supply of Caterham and the neighboring district proved insufficient, and the water company sank a new well, and constructed an adit leading from this to one of the old wells. It happened that one of the workmen employed in the excavations suffered from typhoid fever, but continued work for a while, though troubled with profuse diarrhœa. This man frequently polluted the well with his discharges, and as a consequence the poison was carried into the water mains, and an epidemic of typhoid broke out amongst those using the company's water. In six weeks 350 people contracted the disease. Before the epidemic ceased this number was raised to 370.

I now proceed to relate some examples of another source of infection, namely, milk: —

CASE III. In a district of London called Marylebone, in the summer of 1873, there broke out an epidemic of typhoid fever. Two hundred and forty-four cases occurred in one hundred and forty-three households. On investigation it was found that two hundred and eighteen or nine tenths of these were in families which obtained their milk from the same dairy. But, on the other hand, in sixty-three families supplied by this dairy there were no cases of fever. Further investigation showed that all the families in which the fever appeared used a particular or nursery milk, while not one of the sixty-three families used it. It was further ascertained that this dairy from which the suspected milk came was supplied by seven farms, and from the seventh the nursery milk came. Inquiry at this farm revealed the following facts: A short time previous to the outbreak the occupier fell sick with typhoid fever, and died. His discharges were not disinfected, but in order to guard against contagion they were carried away, and buried in an ash heap beyond the precincts of the farm buildings. It turned out to have been the most unfortunate spot that could have been chosen. The water used for *dairy* purposes had been drawn from a well situated in a yard adjoining the farm-house. This had been given up for drinking purposes on account of its bad taste. It was then shown that the soakage from a certain pig-sty had made its way towards the well along the foundation of a wall. Against this very wall stood the ash heap in which the enteric stools and slops had been buried. Thus the typhoid poison had been introduced into the milk, and 244 persons were infected.

I come now to record a famous epidemic which is strikingly interesting both from the directness with which the source was discovered, and from the virulence of the epidemic itself: —

CASE IV. In the town of Over-Darwen, England, in a house at a considerable distance from the town itself, there arrived a young woman suffering from typhoid fever. The drain from this house emptied itself into a neighboring field for agricultural purposes. Unfortunately, through this field passed the water main carrying the water for the town. Special precautions had been taken

to avert the danger of sewage percolating through into the water. In spite of this, however, it was afterwards found that where the drain and water pipes came in contact there was a leak, which allowed the contents of the drain to be sucked freely into the water pipe. The sequence of events was as might have been anticipated. The dejecta of the first case were thrown without disinfection into the water-closet; from here they passed into the house drain, and entered the water main, which in turn distributed the poison amongst the inhabitants of the town. In three weeks from the arrival of the first young lady a terrible epidemic broke out, and 2035 persons were attacked.

Although I might add to this list the stories of many more epidemics, I will not task your patience with telling them. Those I have just related are but a few of the many I have collected. I have here a long list of many more, all occurring within the past few years, and traced to the pollution of either milk or drinking water with the poison in the discharges of typhoid patients, and by which 7148 persons were attacked. In this number I have not included the epidemics of North Taunton, of Arcot, of Basle, of Baldock, of Beddle, of Bradford, of Dewesbury, of Guildford, of Hucknall Torquard, of Lewes, of Sherborne, of Terling, of Tideswell, of Crosshills, of Dublin, of Tolcarne Head, of Swansea, and of Croydon (1878), and Shrewsbury, by which many thousands more were attacked, because, though distinctly traced to the pollution of water or milk, it was not, in my opinion, shown conclusively that the poison of typhoidal discharges was also present. Nor have the large number of smaller epidemics been included, even though traced to specific infection, because of the labor necessary for the research.

The epidemics which have been utilized were all, or nearly all, investigated by official inspectors, sanitary experts of the highest skill, and by them reported on. As a result we have a total of seven thousand one hundred and forty-eight cases in which it was distinctly determined that the poison had been transmitted from the intestinal discharges of a previous case. Seven thousand cases which might have been prevented had proper precautions been taken.

There can be no doubt that the little town of Lansen would have been spared the terrible catastrophe which overtook it were it not for the carelessness and indifference of the people who failed to obey the directions of the physician attending the first case.

Had the intestinal discharges of the farmer, who supplied the dairy at Marylebone with milk, been disinfected before being disposed of in the ash heap, that town would have escaped the disaster which befel it.

Had proper precautions been taken in disposing of the excreta of the young woman who carried the fever to Over-Darwen, two thousand inhabitants of that unhappy town would have been spared.

The same story is repeated over and over again. It was repeated in Lower Gornae, where seven hundred persons were infected from poisoned privies and wells, and in Glasgow in 1873, and again in 1878 and 1880, where nearly four hundred caught the fever from polluted milk. It was repeated in Hawkesbury Upton, where one hundred and thirteen persons out of six hundred inhabitants contracted the fever by drinking water which had been infected with the discharges of a man, who arrived in the village while sick with the fever, and in the little settlement of North Boston, where over half the population fell sick within a month after the arrival of a stranger ill with the disease. It has just been repeated in the pollution of the water supply of Bangor, England, and the outbreak of an epidemic which only ceased during this last month, and which attacked five hundred and forty-eight persons. It was repeated everywhere else.

How little the mere numerical figures tell us of the real suffering inflicted. How little they tell us of the long days and nights of lingering pain, of the anxious watchings, the midnight vigils, the alternate hopes and fears, and the vacant hearths. How little of all this can be told with numbers. This can only be known by those who have suffered.

(To be continued.)

RECENT PROGRESS IN MEDICAL CHEMISTRY.

BY WILLIAM B. HILLS, M. D.

TOXICOLOGY.

DISTRIBUTION AND ELIMINATION OF LEAD.

Victor Lehmann [1] has reached the following conclusions as the results of experiments made upon rabbits to whom varying amounts of nitrate of lead had been administered subcutaneously. The amount of lead in the organs and secretions is dependent only to a certain extent upon the amount introduced into the system.

The greatest amount is found in the bile, heart, and kidneys; after long-continued administration the amount in the brain and bones becomes considerable.

The liver, muscles, and blood invariably contain a smaller quantity than the remaining organs and secretions. In one case 0.250 grammes of nitrate of lead was administered; the amount of lead extracted from three grammes of bile exceeded slightly the amount extracted from thirty-two grammes of liver.

Elimination takes place through the urine and bile about equally. Lead could not be detected in the urine sixteen days after the administration of 0.5 grammes of nitrate of lead. If, twenty-four to thirty days after poisoning, and when lead could no longer be detected in the urine, iodide or bromide of potassium was administered to the amount of fifty milligrammes daily, lead again appeared in the urine in appreciable quantity. An equal amount of chloride of sodium had no influence on the elimination.

THE ACTIVE POISON IN THE COMBUSTION-PRODUCTS OF TOBACCO.

R. Kissling [2] has collected the principal publications on this subject, and the present paper is devoted to a critical discussion of the same, and at the same time to an account of his own investigations.

Referring to Melsens' researches the author mentions that he is the only investigator who has conclusively established the existence of nicotine in tobacco-smoke. The quantity of this alkaloid amounts to about 0.7 per cent. of the weight of tobacco consumed, and about fifteen per cent. of the total quantity of nicotine contained in tobacco. He shows that Vohl's opinion as to the non-existence of nicotine in tobacco-smoke is without foundation. Vohl evidently disregarded the fact that nicotine is decomposed by warm potassic hydrate. The publications of Heubel, LeBon, and Pease, who found nicotine in tobacco-smoke, cannot be regarded as a satisfactory solution of the whole question, as they are very incomplete.

[1] Berichte der deutschen chemischen Gesellschaft, 1882, page 2627, from Zeitschrift für physiologische Chemie, vi., p. 528.

[2] Journal of the Chemical Society, London, 1882, pages 906 and 1253, from Dingler's polytechnisches Journal, 1882.

The author's investigations were made mainly with a view of proving the presence of nicotine. His experiments were made with cigar-smoke, as this is the form in which tobacco is most extensively consumed. The smoke of a cigar was drawn, by means of an aspirator, through a long condensing tube and a system of five flasks. The first and third flasks were empty, the second contained alcohol, the fourth dilute sulphuric acid, and the fifth weak soda-lye. The current of air, and with it the intensity of smoking, was regulated so that a cigar lasted for about half an hour. The ingredients condensed and absorbed in the various flasks were then examined. Full details are given of the various experiments and of the methods of examination employed, and the results are arranged in a series of tables.

The conclusions arrived at by the author are the following: Carbonic oxide, sulphuretted hydrogen, hydrocyanic acid, the picoline bases, and nicotine are the active poisons contained in tobacco-smoke. The quantity of the first three constituents is too small and their volatility too great to be of importance in determining the influence of smoking on the organism. The picoline bases also are present in relatively small quantities, so that the toxic action of the smoke is essentially due to the large proportion of nicotine contained therein. As the cigar becomes shorter the smoke becomes richer in nicotine. The proportion of nicotine destroyed by smoking a cigar is relatively small.

POTASSIO-BISMUTHOUS IODIDE AS A TEST FOR ALKALOIDS.

F. Mangini[1] finds that the characters of this reagent vary considerably according to the manner in which it is prepared. When obtained by Russland's process, described by Dragendorff, it produces a turbidity even in pure water; but when prepared by mixing three parts of iodide of potassium with sixteen parts of liquid iodide of bismuth and three parts of hydrochloric acid, it does not give any turbidity with water, and is an extremely delicate test for alkaloids, serving also to distinguish many of them one from the other by the various gradations of color of the precipitates and their alterations after long standing. The behavior of the more important alkaloids with this reagent is described in the original paper.

URINARY CHEMISTRY.

REDUCING SUBSTANCES IN THE URINE.

W. G. Smith, M. D., in a paper read before the Dublin Biological Club, April 18, 1882,[2] reports a case in which the urine presented all the characteristics of a urine described by Boedeker in 1861, that is, it contained a reducing substance, with a strong affinity for oxygen. Boedeker gave the name alkapton to this substance. The urine in the case reported by Dr. Smith was passed by a girl three years old, apparently in perfect health, and not taking any medicine. It was normal in appearance when first passed, but on being allowed to stand it deepened in color, and stained the child's linen. Its specific gravity was 1025, its reaction acid. Bile and albumen absent. Urea = 1.2 per cent. The urine gave the reactions of the so-called alkapton. Ferric chloride produced a distinct green color, which was turned reddish brown by the subsequent addition of an alkali.

It is probable that the word alkapton can no longer be considered as referring to any definite substance. If retained it must be regarded rather as a general term including several bodies which confer upon urine the property of becoming dark with an alkali, from above downward. In Ebstein and Müller's case[3] it appears probable that the alkapton reaction was due to brenzcatechin, which is known also by the name pyrocatechin.

In Dr. Smith's case the reducing substance was precipitated by the basic acetate of lead. The precipitate was washed, diffused in water, and decomposed by sulphuretted hydrogen; the sulphide of lead was separated by filtration, and the filtrate distilled in an atmosphere of carbonic-acid gas. The reducing body remained in the residue. From the fact that it did not volatilize on distillation, and on account of the characteristic reaction with ferric chloride, which was obtained both from the original urine and from the residue after distillation, Dr. Smith concludes that the body which gave the reactions was protocatechuic acid. An optical examination made subsequently by Professor Hartley confirmed this conclusion.[4]

From the researches of M. Vetlesen, published in *Nordiskt Medicinskt Arkiv* for 1882,[5] it appears that during the internal use of oil of turpentine the urine contains a rather large quantity of a reducing substance, which, on boiling, reduces an alkaline solution of oxide of bismuth, and reduces the black oxide of copper, and seems by its reactions to be composed in great part of matter strongly resembling grape sugar without being in any way identical with it. The reaction disappears after fermentation, which process appears to act more slowly than with grape sugar. A small quantity of hydrochloric acid destroys this reducing substance at a relatively low temperature, while grape sugar is only slightly destroyed. It appears to be optically indifferent. The body is probably a kind of fermentable sugar, the nature of which is not exactly determined. Its quantity seems to be related to the amount of the dose of turpentine, and diminishes if the use of this drug is continued for a certain time.

A VARIETY OF ALBUMEN COAGULATED BY NITRIC ACID AND REDISSOLVED BY ALCOHOL.

The most common test for albumen in the urine is the nitric-acid test. After the internal use of turpentine or balsams the urine at times contains resinous matters which are precipitated by nitric acid as a white cloud, which is redissolved on the addition of alcohol, and is thus distinguished from albumen. L. Garnier[6] calls attention to two cases of nephritis in which the urine treated with nitric acid gave a coagulum soluble in alcohol; the patients, however, had taken no turpentine or balsams. Further study showed that these urines contained a variety of albumen which was coagulated by boiling, by picric acid, and by alcohol; which reacted to Millon's reagent; which was coagulated by nitric acid; the nitric acid coagulum was, however, soluble in alcohol, and might have been mistaken for resinous matters, if its reactions had not been further studied. The amount of

[1] Journal of the Chemical Society, London, 1882, page 900, from Gazzetta, 1882, page 155.
[2] The Dublin Journal of Medical Science, June, 1882, page 465.
[3] Virchow's Archiv, lxii. p. 554.
[4] Compare the JOURNAL, January 6, 1876, page 11, and July 6, 1876, page 8.
[5] Medical Times and Gazette, September 16, 1882, page 364.
[6] Journal de Pharmacie et de Chemie, November, 1882, page 339.

albumen in the twenty-four hours' urine was in one case three and one half grammes, in the other case two grammes.

COMMON SALT AS A TEST FOR ALBUMEN.

Dr. William Roberts[1] recommends a saturated solution of salt, acidulated with about five per cent. of the dilute hydrochloric acid of the Pharmacopœia, as a very delicate test for albumen. The method of applying the test is similar to that employed with nitric acid. The salt solution is allowed to flow down so as to form a distinct layer below the urine. If albumen is present a white cloudy zone appears at the junction of the two fluids. The precipitation of albumen by an acidulated salt solution is not due to a true coagulation. In this respect the salt test differs from the nitric acid and heat tests. In the latter cases the albumen is transformed into an insoluble modification, coagulated albumen. In the salt test the precipitate is not insoluble, but is redissolved by the free addition of water, or even by the free addition of the albuminous urine itself. It is therefore essential that the salt solution should be in excess at the point of the expected reaction. In point of delicacy the salt test equals the nitric acid test. In high-colored urines it is superior, as it does not produce any deepening of the tint as nitric acid does, neither does it disengage any gas. It causes no precipitation of urates. Like nitric acid it produces a cloudiness in the urine of patients taking large doses of resinous substances, and it produces this reaction whether the liquid is hot or cold. The cloudiness caused by resinous substances is not removed by the addition of more urine. Another advantage of the salt solution is its non-corrosive character. A serious disadvantage is that it precipitates peptones, so that a slight cloudiness may occasionally be obtained in urines with which the nitric acid and heat tests give no reaction. Dr. Roberts thinks a better idea of the quantity of albumen present, as indicated by the density of the cloud, is obtained by the nitric-acid test.

NEW URINARY COLORING MATTERS.

Three new urinary coloring matters have been observed. P. Plósz[2] met with one in the urine of a patient suffering from cysto-pyelitis with chronic parenchymatous nephritis. The urine, upon exposure to the air, assumed first a greenish-brown, after longer standing a reddish, color on the surface. The sediment contained a reddish-violet coloring matter, crystallizing in sheaf-like collections of needles or rhombic plates; it was soluble in ether or chloroform; its solution showed two well-marked absorption bands, one between D and E, but nearer D, the other between b and F, but nearer F. The coloring matter was not changed by exposure to air, warming, by acids, or alkalies. The author suggests that it may be a scatol derivative, analogous to indigo-blue. It was again met with in the urine of a patient suffering with chronic peritonitis with effusion into the abdominal cavity.

M. Nencki and N. Sieber[3] have obtained from urine a new coloring matter for which they propose the name uroroseïn. It was first obtained by them from the urine of a patient suffering from a severe form of diabetes mellitus. In four other cases of the same disease the coloring matter was absent. They have met with it in the urine in other diseases; in all, in about ten per cent. of the pathological urines examined by them. They have never found it in the urine of persons in health. It may be detected as follows: five to ten cubic centimetres of a twenty-five per cent. solution of sulphuric or hydrochloric acid are added to 50–100 cubic centimetres of urine. If uroroseïn is present the urine assumes a reddish color; the urine is then gently shaken with a few cubic centimetres of amylic alcohol, which takes out the coloring matter. The red alcoholic solution shows a characteristic absorption band between D and E, but somewhat nearer D. The color appears to exist in the urine in the form of a sulpho-acid, the salts of which are decomposed by mineral acids in the cold. It is not removed from urine by common ether, chloroform, benzol, or bisulphide of carbon; it is, with difficulty, soluble in acetic ether; ammonia, the fixed alkalies, and alkaline carbonates immediately decolorize the red solution obtained by the addition of acids to the urine, but the color returns upon the addition of an acid in excess. Its acid alcoholic solution is immediately decolorized by zinc dust; if, however, the filtered liquid is exposed to the air it soon assumes again the red color. The coloring matter is very unstable, and this fact, the authors think, explains its non-observance hitherto in pathological urines. Uroroseïn differs distinctly from urobilin and indigo-blue, and from all coloring matters hitherto found in pathological urines. It resembles closely the rosaniline colors, but differs from them in being very unstable.

E. Neusser[4] has observed a new pathological coloring matter in the urine of a patient suffering from pleuritis. The urine had a blood-red color, an acid reaction, and contained no albumen. Examined spectroscopically it showed two sharply defined absorption bands between D and E, occupying the position of the oxy-hæmoglobin bands; also a tolerably strong darkening of the violet end of the spectrum up to the line b. The spectrum was not changed by the addition of sulphide of ammonium or by boiling with potassic hydrate. If the urine was boiled with hydrochloric acid and then decomposed with potassic hydrate, the coloring matter was carried down with the phosphates and could be removed from the precipitate by means of alcohol acidulated with sulphuric acid. It could also be extracted from the evaporated urine by means of alcohol containing oxalic acid, but not by ether or non-acidulated alcohol.

The urine did not respond to the turpentine and guiacum test. Tannin gave a dirty-red precipitate, from which no hæmin crystals could be obtained. It was not satisfactorily determined whether or not the coloring matter contained iron. The acid alcoholic solution was decolorized by zinc and hydrochloric acid, as well as by sodium amalgam. From the spectroscopical appearances, which are minutely described in the original paper, Neusser concludes that the coloring matter is either hæmatoporphyrin or a body very similar to it. He met with the coloring matter a second time in an albuminous urine of a patient with tuberculosis.

ACETO-ACETIC ACID. ACETONURIA.

Jaksch[5] believes he has isolated the substance which

[1] The Lancet, October 14, 1882, page 613.
[2] Zeitschrift für physiologische Chemie, vi., p. 504.
[3] Journal für praktische Chemie, 1882, Nos. 17, 18, page 333.
[4] Zeitschrift für analytische Chemie, 1882, page 476. Abstract.
[5] Berichte der deutschen chemischen Gesellschaft, 1882, page 1496.

in many urines causes a red color upon the addition of ferric chloride. He finds that it is an acid, soluble in water, alcohol, and ether. It forms salts with the bases. He has as yet obtained none of these in the crystalline form. The acid, which in his opinion is aceto-acetic acid, as well as its salts, even when in minute quantity, gives a red color upon the addition of ferric chloride. They are decomposed, upon warming, with the production of acetone.

Jaksch has also examined[1] the urine in nearly six hundred cases of various acute and chronic diseases, and finds that the reaction in question may occur not only in the urine in diabetes mellitus, but also in that of the acute exanthemata and other affections. He also finds that the substance producing the reaction may be distinguished in two ways from other substances, as formiates, acetates, phenol, salicylic acid, and sulphocyanic acid, which give a similar color with ferric chloride.

(1.) It is decomposed by heat; if, therefore, the urine is boiled for five or six minutes the reaction can no longer be obtained.

(2.) It may be removed from the urine by shaking the latter with ether, and may be detected in the ether solution by the addition of ferric chloride; the red color thus obtained fades upon standing for some days.

The red color produced by the substances previously mentioned is stable; if due to formiates or acetates the color disappears upon boiling, and a basic salt of iron is precipitated; salicylic acid may be removed by shaking the urine with benzol or chloroform, which do not remove aceto-acetic acid.

Jaksch also believes[2] that the volatile substance which, according to Lieben,[3] is contained in the distillate from normal urine, and from which iodoform is obtained by the action of sodic or potassic hydrate and iodine, is acetone, which must therefore be considered a constant and normal product of tissue metamorphosis.

The amount of acetone in the daily urine of a person in health is probably not more than 0.010 gramme. An increased amount is at times found in the urine in diabetes mellitus, especially in those cases in which the urine gives the red color with ferric chloride. But the author has also found that the distillate from febrile urines contains with great regularity and in relatively large quantity a substance which gives the iodoform reaction. This substance was obtained from three hundred litres of febrile urine, and was separated by fractional distillation into two bodies, one of which came over at 55.8° C., the other at 73°–76° C. The first was identical in all its properties with acetone, the second with alcohol, containing traces of acetone. From three hundred litres of urine 6.3 grammes acetone and 2.2 grammes alcohol were obtained. The quantity of acetone in febrile urine is, as a rule, several decigrammes, and increases as the fever increases. In non-febrile affections the amount of acetone excreted is not, as a rule, increased. Exceptions were observed, however, in some cases of carcinoma, in hydrophobia, in the so-called acetonæmia, and in certain cases of diabetes mellitus. In increased acetonuria the urine at times, but by no means always, gives the reaction for aceto-acetic acid.

[1] Zeitschrift für analytische Chemie, xxi., p. 475, from Prager Zeits. f. Heilkunde, iii., p. 17.

[2] Berichte der deutschen chemischen Gesellschaft, 1882, page 2628, from Zeitschrift für physiologische Chemie, vi., p. 541.

[3] Ibid., from Ann. Chem. Pharm.

Hospital Practice and Clinical Memoranda.

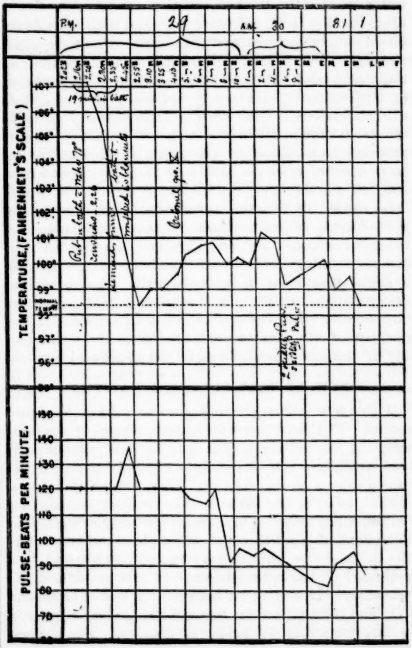
BOSTON CITY HOSPITAL.

CASES IN THE SERVICE OF A. M. SUMNER, M. D.

REPORTED BY DR. MAURICE D. CLARKE, HOUSE PHYSICIAN.

TWO CASES OF SUNSTROKE. RECOVERY.

——— ———, a single man, thirty-three years old, a native of Ireland, a waiter at the Parker House was brought to the hospital July 29th (an excessively hot day) by the police, who could give no information about him. He was unconscious; his pupils were slightly unequal, contracted, and irresponsive to light; his breathing labored; an odor of alcohol was detected in his breath; his temperature, by the rectum, was 107.2° F.; pulse 120, of fair strength.



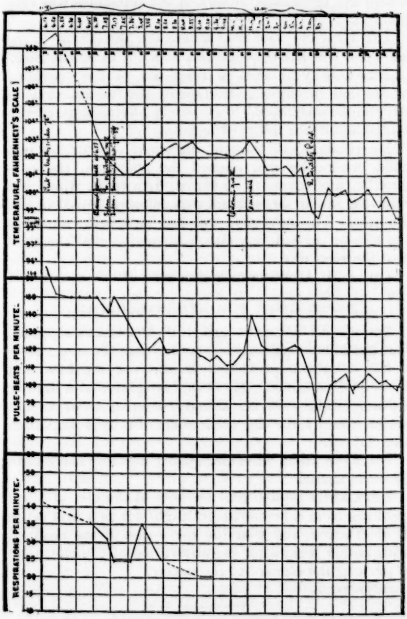
The diagnosis of sunstroke was made, and the patient was placed in a bath of 78° F., and an ice-bag applied to his head. In ten minutes he was able to tell his name and answer questions. At the end of fourteen minutes the temperature had fallen nearly two degrees, and five minutes later it was 102.7° F., when he was taken out of the bath, placed on a bed, and covered with blankets. The temperature, however, continued to fall until, twenty minutes later, it reached 98.6° F. The pulse remained at 120 till evening, when it fell to 92. There was a secondary rise of temperature (101° F.) in the night, and a fall to normal

the next morning. Physical examination, later, discovered a general bronchitis and chronic catarrhal pneumonia at one apex. He had no other symptom or sign, and was discharged the next day.

—— ——, a widower, sixty-eight years old, a native of Ireland, without any occupation, was found unconscious in a barn the afternoon of August 9, 1882, and taken to the hospital two hours later, still unconscious (Dr. E. J. Forster on duty). Temperature by rectum 108.4° F.; pulse 168, of fair strength; respirations 42; pupils alike, contracted, and irresponsive to light. He had had involuntary dejections. He was put at once in a bath at 78° F., and an ice-bag placed on his head.

Five minutes later the temperature had risen to 108.8° F., and the pulse was 152. The breathing was irregular, sometimes stopping altogether for a second or two. The pupils began to dilate.

Twenty-five minutes later the temperature had fallen to 104.7° F.; pulse 150; respirations 36. Parts of



the body turned bluish, and friction was applied smartly with the hands and with a flesh-brush.

After being in the bath thirty-eight minutes he was taken out, the temperature then being 103.4° F. and the pulse 150. The heart's action was quite feeble, and ten minims of tincture of digitalis and ten grains and a half of ammonium carbonate were given by hypodermic injection. He was left naked on the bed to still farther cool.

Thirteen minutes afterwards the temperature was 102° F.; pulse 141. Nine minutes later he vomited and had an involuntary dejection. Fourteen minutes later the temperature was 101.5° F.; pulse 150; respirations 24. He was covered with blankets and surrounded with heaters.

After the lapse of eighteen minutes the temperature fell to 101° F., which was the lowest point it reached until the next morning. The pulse was 132. There was another involuntary dejection. Ten minutes later the temperature had risen to 101.6° F., but the pulse had fallen to 120. The pupils were dilated but responsive, and other reflexes were present.

For the next hour and a quarter the temperature was over 102° F., reaching 102.8° F. once, but the pulse continued to fall. The blankets were removed, and he was given several sponge baths. There was another involuntary dejection and several slight attacks of vomiting.

Four hours and a quarter after being put into the bath his temperature was 102° F., pulse 112, and he was semi-conscious, but it was not until an hour and three quarters later that consciousness fully returned. There were no unfavorable symptoms during the night, but it was not until the next morning that his temperature reached normal. There was a slight secondary rise (99.4° F.) during the day.

Physical examination showed some pulmonary emphysema and chronic bronchitis, a heart somewhat dilated, with mitral insufficiency, pulmonary œdema, and atheromatous arteries. He remained in the hospital three weeks, during which time the heart's action became more regular, the œdema disappeared from the lungs, and the general physical condition improved. His mind, however, showed signs of decay, he never seeming fully to realize his surroundings, and being subject to delusions about his friends and himself. This condition may have existed before the sunstroke. The day after the attack there was albuminuria, but this disappeared before he was discharged.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

H. C. HAVEN, M. D., SECRETARY.

JANUARY 3, 1883. DR. R. M. HODGES in the chair.

DR. H. B. BOWDITCH exhibited Professor Bell's

INDUCTION BALANCE AND ELECTRIC PROBE FOR BULLETS,

and, assisted by Mr. Gleeson, demonstrated its action. A needle, buried in the thigh of a patient of Dr. A. T. Cabot, was accurately located; its position had been previously ascertained by Dr. Cabot, and its correct location by the instrument was subsequently demonstrated to those present.[1]

On motion of Dr. H. I. BOWDITCH, the thanks of the Section were voted to Professor Bell and Mr. Gleeson.

DR. J. COLLINS WARREN reported.

TWO CASES OF COLOTOMY.

DR. JOHN HOMANS, in opening the discussion, spoke as follows: I consider colotomy one of the most benefi-

[1] For full description of the instrument and Dr. Bowditch's remarks see the Proceedings of the Boston Society of Medical Sciences, to be hereafter published.

[2] See page 172 of this number of the JOURNAL.

cent of now curative operations, the relief afforded being very great.

This operation is very popular in England. There is a great difference in the amount of distention of the abdomen in intestinal obstruction. Some patients go four or five weeks without much distention.

I saw one case where there had been no movement of the bowels for two months, the skin was brown, and the sweat had a fæcal odor; it is now a year, and I am *told* there has been no movement. The first time I operated I had never seen it done; this case was reported in the Boston Medical and Surgical Journal. The woman was a patient of Dr. Cutler's. There was temporary obstruction of the rectum following confinement six weeks previously. There had been no dejection for three weeks, and the vomiting was stercoraceous. Allingham's method was employed. The patient recovered, and the rectum became patent. She went to New York, and I afterwards heard of her through the late Dr. Erskine Mason, who had tried to close the small fistula which was left, but without success.

In the second case I removed an ovarian tumor from a woman in 1881. Some time after constipation was noticed, which gradually increased until not even flatus was passed. I thought at first that the operation was responsible for it. I opened the abdomen through the cicatrix, and found nodules of cancer. Upon separating the intestine from the cicatrix no obstruction was evident, but an annular stricture was finally discovered at the upper end of the sigmoid flexure. I did not try to excise it, as I could not get it above the mons veneris. Dr. Elliot held the bowel while I made an incision into it and stitched it to the edges of the skin just over the pubes. A great gush of fæces followed, and I think that a little got into the abdominal cavity. She recovered entirely, and got through the following summer very comfortably. Her only difficulty was that she could not control the passage of wind. She died about a week ago, and at that time there was a mass of cancer extending from the left inguinal region up to the liver. My next case was that of a woman from the West with intestinal obstruction. She was a patient of Dr. Nichols. I made my incision on the right of the rectus into the peritoneal cavity, and on exploration found obstruction in the descending colon near the lower splenic region. It was very difficult to return the coils of intestines through the incision before opening the colon, and this is the difficulty which is usually met with in these anterior peritoneal operations. I finally succeeded in reducing the bowels; opened the colon and stitched the edges to the edges of the incision. Great relief followed, but the final result was fatal. The discomfort which follows this operation is not as great as would be supposed. A pad is worn over the artificial anus, which is removed at regular periods, and the fæces are received into some conveniently-shaped cup. I consider the lumbar operation the best, although it is difficult to decide often whether to operate on the right or left loin. The operation relieves the patient from a great deal of suffering, and the after condition is not as nasty as is commonly imagined.

In reply to a question by Dr. Lyman, as to whether contraction of the opening followed, Dr. Homans replied in the negative, and that in the lumbar region there was even a tendency to prolapse.

For the first few days there was apt to be a considerable discharge of mucus.

DR. GANNETT asked if there was any desire for defecation in these cases?

DR. HOMANS had not met with it. In one of his cases fæces were sometimes formed in the rectum, and had to be dug out at intervals.

DR. WARREN stated that one of his patients did have a sensation of desire to defecate. It was stated that if the opening was small it had a tendency to close.

DR. H. P. BOWDITCH asked Dr. Homans where the fæces present in the rectum, as mentioned by him, came from, and whether they might not have been there before the operation?

DR. HOMANS thought there might have been a private passage through which the liquid parts of the fæces passed and afterwards became solid.

DR. MIXTER said that he had seen Mr. Heath operate in London, and that he had been obliged to puncture the bowel to relieve the distention before being able to return it.

DR. LYMAN spoke of a case under his observation, where the vermicular motion of the intestines was very marked.

DR. HOMANS said that where the distention of the abdomen was not extreme this was apt to be the case.

DR. CHEEVER said, in reference to the operation of incision through a stricture of the rectum, that his experience was limited to two cases; abscess, pelvic cellulitis, and death followed in both.

He recalled one case of intestinal obstruction in a child, where he had opened the abdomen, the constriction was found to be caused by a twist, which was relieved, and a large liquid evacuation followed in five minutes. The operation was too late, being done on the fifth or seventh day after obstruction, and the child died the next day.

DR. A. T. CABOT reported a case of

NEPHROTOMY FOR HYDRONEPHROSIS.[1]

DR. C. D. HOMANS asked if Dr. Cabot supposed that the kidney was normal at the time the boy fell.

DR. CABOT replied that he did not see how that could be determined. He should imagine that a slightly movable kidney or an already existing twist in the ureter would favor the occurrence of a hydronephrosis after injury.

DR. FITZ asked whether hæmorrhage might not have been the cause?

DR. CABOT replied that he thought the clot of blood resulting from a hæmorrhage might act as a first cause of obstruction, and that the distention of the retained urine would then, after the absorption of the clot, tend to prolong the closure of the ureter.

Adjourned.

MASSACHUSETTS MEDICAL SOCIETY, COUNCILORS' MEETING.

A STATED meeting was held at No. 19 Boylston Place, Boston, on February 7, 1883, at eleven o'clock, A. M.

ELECTION OF DELEGATES.

The meeting was called to order by the President, Dr. Alfred Hosmer. After the reading and acceptance of the record of the previous meeting, delegates were appointed to represent the Society at the meetings of other State Medical Societies, as follows: —

[1] See page 173 of this number of the JOURNAL.

Maine: Drs. J. Ayer, of Boston; G. D. Colony, of Fitchburg.

New Hampshire: Drs. F. H. Hooper, of New Bedford; C. Dutton, of Tyngsborough.

Rhode Island: Drs. T. H. Gage, of Worcester; W. N. Stone, of Wellfleet.

Connecticut: Drs. S. L. Abbot, of Boston; G. J. Townsend, of South Natick.

New Jersey: Drs. H. P. Walcott, of Cambridge; G. H. Pillsbury, of Lowell.

Committees were appointed to audit the Treasurer's accounts, to examine the library, to examine the By-Laws of District Societies.

Reports were received from the Committee on Finance, recommending the remission of dues to certain Fellows; also from the Committee on Membership recommending that some members be dropped from the roll for non-payment of dues, and that some others be allowed to retire or resign. The recommendations of these committees were adopted.

LETTER FROM SIR JAMES PAGET.

The following letter, addressed to the Recording Secretary, was read: —

"LONDON, *October* 9, 1882.

"SIR, — I shall be obliged by your offering to the officers and members of the Massachusetts Medical Society my grateful thanks for the honor they have conferred on me in electing me an honorary member of their body. It shall be a motive to me to strive still to do good scientific work.

"I am, sir, obediently yours, JAMES PAGET."

DIPLOMAS. — ADMISSION TO THE SOCIETY. — CENSORS.

In accordance with the recommendation of the Committee on Medical Diplomas it was voted that the Columbus Medical College, of Columbus, Ohio, be dropped from the list of medical colleges whose diplomas are recognized for admission to the Society.

The committee appointed in June, 1882, to report on the subject of admission to the Society responded through Dr. Shattuck. The report stated that it would be very undesirable to apply to the Legislature for any modification of the charter. Experience proves that by-laws should not be abrogated or modified except for urgent cause. The present system of admission to the Society comes from much deliberation and experience, and the growth of many years. Much is being done, and more may still be done, to promote its wise administration. It has not been thoroughly tried, and we should wait till this has been done before we start on a new departure.

The committee offered several resolutions, of which, after considerable discussion, the following were passed: —

Resolved, That the Councilors of the Massachusetts Medical Society hereby call upon District Societies to exercise great discretion and care in the choice of Censors, and exhort all Censors to a faithful and painstaking discharge of their duties as set forth in the By-Laws and Rules.

Resolved, That the Councilors hereby express their approval of stated and occasional meetings of all the Censors, — who may thus confer as to how their responsible duties may be performed to the greatest advantage of the important interests intrusted to them, — and recommend a continuance of these meetings.

Resolved, That the Councilors hereby call the attention of District Societies and Censors to the following matters of great importance: —

All Censors must be elected by ballot, and can only be elected at the annual meetings of District Societies.

No Censor can act as such unless he be present at the meeting. No Censor can act by deputy.

No Board of Censors can hold a special meeting, or adjourn except to a specified time and place.

Every board except the Suffolk Board must hold a meeting whenever there is a stated meeting of its District Society.

Resolved, That a copy of these resolutions be sent by the Secretary to every Censor and to every Secretary of a District Society.

REGISTRATION OF BIRTHS AND DEATHS.

A communication was read from the Berkshire District Medical Society protesting against the existing laws of the State regarding the registration of births and deaths, and requesting the Councilors to petition the Legislature for proper compensation to the profession for the performance of duties which the laws demand. After discussion, on motion of Dr. Amory, it was voted that a committee of five be appointed to present the memorial of the Berkshire District Medical Society in regard to the repeal or modification of the registration law, and to appear on behalf of the Massachusetts Medical Society before the Legislature to request a repeal or modification of sections 7 and 9 of chapter 33 of the Public Statutes.

The following were appointed to constitute the committee: Drs. R. Amory, H. Holmes, A. H. Cowdrey, E. B. Harvey, L. Miller.

Adjourned at 12.30 P. M.

Recent Literature.

Anatomical Technology as Applied to the Domestic Cat: an Introduction to Human, Veterinary, and Comparative Anatomy. With Illustrations by BURT G. WILDER, M. D., and SIMON H. GAGE, B. S., New York and Chicago: A. S. Barnes & Co. 1882.

The readers of the works of any observer noted for the strength with which he holds original and not generally accepted views can hardly help joining the group of his admirers or opponents according as they agree or not with these views, quite irrespective of the merits of the work immediately before them.

We shall endeavor in this case not to follow the common custom. Professor Wilder's views on homologies and on nomenclature have been sufficiently discussed in these pages and elsewhere. We do not share them; but that is no reason why we cannot give well deserved praise for great labor, patience, and knowledge. The student who will carefully dissect a few cats according to the rules given in this book will have a great advantage over the one who begins his work with the human body, and if he will master the instructions for the various methods of preparation, he will know more than most graduates in medicine.

A Guide to the Practical Examination of Urine. By JAMES TYSON, M. D. Fourth edition. Philadelphia: P. Blakiston, Son & Co. 1883.

Previous editions of this book have been favorably noticed in the pages of the JOURNAL. The present edition furnishes evidence of careful revision. A few errors which occur in the third edition have been corrected, and several additions, of such a character as to add to the completeness of the book without increasing much its size, have been made to the text. A colored plate, illustrating Vogel's scale of urine tints, has also been added. We can recommend the book to practitioners and students as the best working guide to the practical examination of urine in the English language.

W. B. H.

Medical and Surgical Journal.

THURSDAY, FEBRUARY 15, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

THE WEIGHT AND DEVELOPMENT OF THE BRAIN AS INDICATIVE OF INTELLECTUAL FORCE.

THE examination of the brain of Gambetta and the reported results have called attention again somewhat, to the relation of the weight of a brain and development of its convolutions to the intellectual force of the individual, and it may not be amiss to recall once more what is known and what is not known in regard to this question.

Gambetta's brain, if the report reaching us was correct, weighed only 1160 grammes, or about thirty-six ounces. This is a very small brain, from whatever point of view regarded, whether from that of age, of sex, of race, or of body stature. The development of the convolutions on the other hand, it is stated, was more than usually varied and well defined. Gambetta must be acknowledged to have been possessed of gifts and acquirements in a marked degree, of the so-called intellectual character, as well as of others of an emotional nature.

Since Gambetta's death we have received the report of the post-mortem examination of a quite well-known gentleman dying in Ohio, Dr. E. H. Knight, formerly employed in the Patent Office at Washington, subsequently one of the American Commissioners to the French Exposition of 1880, and author of the Mechanical Dictionary. He was a man of marked mental activity and vigor, endowed with a phenomenal and very correct memory. His brain is reported as having weighed sixty-four ounces, but we are ignorant of the appearances presented by the convolutions.

We cite these two extreme instances, coming within a few weeks of each other, as showing how difficult it is to arrive at any fixed law in regard to this subject, especially from individual cases. The results reached by Rudolf Wagner, who in 1860 published a table of nine hundred and sixty-four recorded cases in which the weight of the brain had been ascertained, are thus summarized by Quain: First. Although the greatest number of brains belonging to men of superior intellect are found to be heaviest or largest, yet there are so many instances in which the brains of such persons have not surpassed or have even fallen below the average size of the brains of ordinary persons, that superiority of size cannot, in the present state of our knowledge, be regarded as a constant accompaniment of superiority of intellect, even when due regard has been paid to the comparative stature and other circumstances of the individuals. Second. It would appear that, in the brains of certain persons of superior intellect, the cerebral convolutions have been found more numerous and more deeply divided than in those of persons of ordinary mental endowments and without cultivation. But numerous exceptional instances are also found of paucity of convolutions coincident with superior intellect, which makes it impossible at present to deduce any certain conclusion with respect to the relation between the number or extent of the convolutions and the intellectual manifestations of different persons.

Very much the same view is taken by Pozzi in the *Revue d'Anthropologie* for 1878. He is disposed to lay a good deal of stress upon the composition and thickness of the gray substance, and, in regarding the brain as a mixed organ serving both for the elaboration of thoughts and for excitation of direct muscular movements, to consider muscular development as well as stature as a factor. The same view again is taken by Dr. Thomas Dwight in a paper communicated to the American Academy of Arts and Sciences on the brain of a distinguished man.[1]

Age, sex, race, education or intellectual development, muscular development or stature, may be stated as the chief and most constant factors affecting at least the weight of the brain, but any general laws which it has yet been attempted to formulate for these are certainly subject to very numerous exceptions. As to the development of the convolutions and extent and composition of the gray substance, it may be said that no laws, even of the most general character, have yet been suggested, if we except a not very successful attempt by Benedikt, to classify the brains of criminals according to the appearances or absence of certain fissures, and the limited observations of the younger Wagner.

The human brain is found to be absolutely heavier than that of all the lower animals except the elephant and whale. The best observations appear to show that in both sexes the weight increases rapidly up to the seventh year, more slowly to between sixteen and twenty, and again more slowly to between thirty and forty, by which time the maximum weight is attained; subsequently there appears to be a slow but progressive diminution in weight which, according to Boyd, who weighed two thousand and eighty-six brains of sane persons of both sexes dying in the St. Marylebone Infirmary, scarcely begins before sixty years.

The average weight of the brain of the civilized adult male is generally stated at forty-nine and one half ounces, and of the female at forty-four ounces. In a series of two hundred and seventy-eight cases the maximum weight of the adult male brain was sixty-five ounces, and the minimum weight thirty-four ounces; and in a series of one hundred and ninety-one cases the maximum weight of the adult female brain was fifty-six ounces, and the minimum weight thirty-one ounces. These maxima and minima have been surpassed in reported cases, as we shall presently show. As to the relative brain weight in the two sexes, John Marshall[2] states that the "proportion of brain is larger

[1] Mr. Chauncey Wright.
[2] Proceedings of the Royal Society, 1874–75.

in the male than in the female, not only generally but even at corresponding heights, as, for example, in short men as compared with tall women. Evidence [showing] that the well-known sexual difference in the weight of the male brain overrides the influence of stature, which has a tendency to diminish his proportionate amount of brain."

The number of observations upon brains of different races is as yet too limited to be of absolute value, but as far as such have gone would indicate a decided superiority of the European over the semi-civilized or savage races, and a slight superiority in weight of the English or Scotch brains over French or German.

As to the relation of intellectual force and development to the weight of the brain, it can only be said that a number of eminent men in various walks of life — as Cuvier, a naturalist, Knight, a patent lawyer and encyclopedist, Abercrombie, a philosopher and physician, Goodsir, an anatomist, Simpson, a physician, Dirichilet and Gauss, mathematicians, De Morny and Daniel Webster, statesmen, Campbell, a lawyer, Agassiz, a naturalist, Chalmers, a preacher — have had very heavy or average brains, weighing from sixty-four and one half ounces to forty-eight ounces; on the other hand there are instances of idiots with very heavy as well as very light brains, and of eminent men — of whom, perhaps, Gambetta is the most striking example — with brains much below the average.

In regard to the relation of stature to brain weight, Marshall concludes that "all estimates of other influences regulating the brain weights in Man, whether these be sex, age, occupation, education, or disease, are liable to error unless the influence of stature be first eliminated." He finds that "an increase of stature is accompanied by an increase in the absolute weight of the encephalon in both sexes, and that, notwithstanding this absolute increase of the encephalon and its parts in obedience to an increase of the stature, the increase itself is not *pari passu* with the stature; on the contrary, there is a gradual and progressive relative diminution in the proportion of encephalic substance to the stature as this latter itself increases."

As a few exceptions to the usually received opinions in regard to brain weight we have selected the following from various sources: —

In the *British Medical Journal* for 1872 we find the report of a brain of a boy thirteen years of age, who "had been a particularly healthy lad, showing no evidence of rachitis, and very intelligent." He died from injuries caused by a fall from an omnibus. The brain weighed fifty-eight ounces. Dr. Batty Tuke reported in the same journal in 1872 the brain of an idiot which weighed sixty ounces; the cerebellum, however, was deformed, the left half showing numerous abnormal convolutions. In the same volume of the same journal is reported a brain which weighed sixty-seven ounces. The owner was a bricklayer, a man thirty-eight years old, five feet nine inches and a half in height, "could neither read nor write, was not very sober, had a good memory, and was fond of politics." In the collection of the Army Medical Museum at Washington is a brain of the remarkable weight of seventy-three and one half ounces. It was taken from a Chippewa Indian squaw, hydrocephalic and a dwarf. The Proceedings of the Connecticut Medical Society for 1878 contain a report of a female brain weighing fifty-nine ounces. The person is stated to have been of medium stature, body weight one hundred and twenty-five pounds, large head, and nervous temperament, and to have possessed more than average mental ability. She became insane, and committed suicide. Boyd's large series of 2086 brains were taken from the lower classes of London, and yet give an average weight.

In regard to the weight of the brains of the insane, Dr. W. G. Balfour, writing in the *Edinburgh Review* for 1872, and comparing his results with previous figures of Drs. Thurnam, Peacock, and Skae, is inclined to the conclusion that insane brains vary from sane as regards weight in being slightly lighter; that this is dependent on a decrease in the weight of the cerebrum, there being no loss of weight in the cerebellum, and that the cases of chronic insanity and dementia in which serous effusions and œdema of the brain substance are so often met with furnish a probable cause for the decrease. There seems no reason to suppose that in cases of recent insanity any difference between the weights of sane and insane brains is to be detected.

HYDRIATRY.

COLD water has been in all ages recognized as a remedial agent of great power. Irrigations, baths, and epithems, were recommended by Hippocrates, who learned the medicinal uses of water in Egypt. He inculcates the importance of cold drinks and cold epithems in fevers, of cold affusions in hysteria and tetanus, and even in gouty and rheumatic inflammations of the joints, though he says in these cases cold applications should be used with great care. According to Celsus, a certain Petro used to "cover his fever patients with a great many clothes, that he might excite both heat and thirst, whereupon he gave cold water to drink, and if it raised a sweat he pronounced the patient out of danger."

Aetius recommends cold bathing and cold douches for menorrhagia and sexual debility, and many of his modern successors have found the external employment of cold water invaluable in these cases.

Charmis, of Marseilles, in the century in which Pliny lived, recommended all who wished to preserve their constitutional vigor to an extreme old age to take a cold plunge every day, the bath not to be omitted even in the winter season; a regimen which multitudes in his time adopted, and from which many since his day claim that they have derived strength and recuperation. We remember even to have read in the life of that distinguished statesman and representative of modern culture, who was familiarly known as the "Old Man Eloquent" (the late John Quincy Adams), that regularly as the early morning hour arrived he was seen to repair to the river near his dwelling for his customary plunge; in the cold of the winter he used

to take his morning bath through a hole in the ice. The venerable statesman was free to attribute his wonderful constitutional robustness, his freedom from colds, pulmonary troubles, rheumatisms, etc., to the invigorating effects of his daily bath in the river.

Galen treats largely of the uses of cold water in sickness. This author recommends cold drinks and cold epithems in constipation of the bowels; a remedy which certainly sometimes works exceedingly well. We have known severe cases of constipation to be overcome by drinking a goblet of cold, spring water, the last thing at night and the first thing in the morning (the morning draught may for a time, if expedient, be medicated with a teaspoonful of Glauber, Epsom, or even common salt); cold, wet compresses over the abdomen may sometimes be used to great advantage.

Perhaps no event in modern times, till we come down to the epoch of Priessnitz, has tended more to popularize the cold water treatment of disease, than the publication by S. Hahn, in 1738, and J. S. Hahn, in 1745, of two celebrated treatises on the properties and uses of cold water. These physicians lived in Prussian Silesia, not far from Graefenburg, the home afterward of Priessnitz, and their works, according to Stillé, contain a full account of the medicinal uses of cold water, including its application to almost every known disease. We cite from Stillé the following illustration of their mode of treatment: "A lady was affected in almost all her joints with gout, which had resisted every method of treatment. At last she was treated in the following manner: Cold affusions and lotions upon the bare head and body; wrapping in sheets soaked in cold water, and which were kept constantly wet for the space of two nights and two days; she sweated and recovered." This rather heroic treatment of acute gout would, we think, find few imitators at the present day.

Hydriatry was still further brought into vogue by the cold-water treatment of fevers by Jackson and Currie, the latter part of the eighteenth century. Both of them, according to the same authority from whom we have just quoted, were led by fortuitous circumstances to the adoption of this practice. "Jackson, by learning that some twenty years before a number of patients on board a hospital ship, had, in the delirium of fever, thrown themselves into the sea, and that the survivors from drowning were restored to their senses." Currie was indebted to the observations of Dr. Wright, published in 1786, the latter having noted the beneficial effects of cold affusions in fever.

Next comes the era of Priessnitz, and the impulse given by him, as a result of empirical observation, to modern hydriatry. This has been fully dwelt on in the lecture which we publish to-day, in which are described the uses of cold water in nervous diseases, and the divers modes of application. The efficacy of continuous cold applications to the head and spine in cerebral and spinal inflammations is undoubted; here the process of irrigation has found much favor. The *modus operandi* of cold in these cases, in repelling blood from the meninges, is sufficiently understood. That some functional nervous diseases are also benefited — sometimes permanently — by cold douches and cold baths, is also established, though precisely how the "shock," followed by the "reaction," operates, is still obscure. Further study on these points is needed.

The application of cold water in disease is to be recognized as a remedial agent of considerable power, and not to be ordered carelessly and indiscriminately. Our readers will find the lecture on this subject in the present issue of the *Journal* of much interest.

THE FINANCIAL PROBLEM IN THE ENGLISH HOSPITALS.

A CONSIDERABLE falling off in the income of some of the London hospitals has occurred. Four of them have found it necessary during the past year to pay a considerable fraction of their current expenses out of a gradually decreasing reserve. In the case of King's College Hospital the income fell short of the expenditure by £9500; at St. George's the deficiency was £8000; at University College Hospital it was £6000; and at the Westminster Hospital £4000. This deficiency is believed to be due, in part, to the establishment of "Hospital Sunday," with the origin of which, at all events, it was coincident. This method of giving enables persons who have formerly contributed large sums under the glare of a wide-spread publication of subscription lists to make their contributions secretly. It seems that when the left hand does not know what the right hand does, the latter sometimes does less than it otherwise might.

According to figures given in the *British Medical Journal* it would seem that probably the aggregate sums contributed in charity for hospital maintenance were not decreasing, but that the falling off in the receipts of the large general hospitals is counterbalanced by the sums given to the great number of small, special institutions, as those for women, for children, for nervous diseases, and the cottage hospitals, which have sprung up in late years, and which provide for cases formerly treated in general establishments. It is worthy of note that the large pay-hospitals are not suffering from the financial stringency, which suggests a way in which the funds of the other institutions may be replenished, namely, by adding pay-wards for private patients, and by an endeavor to collect even from poor patients a small sum proportionate to their ability. We are inclined to think that in this country at least there is enough gratuitous hospital care furnished, and that if enlarged accommodations are demanded, they should be paid for, in part, at any rate, by their beneficiaries, who will thereby be saved from the undesirable effects of absolute alms-taking.

MEDICAL NOTES.

— Permanganate of potassa seems to be the latest wrinkle among the medical quidnuncs. Injections of Condy's fluid have long been well thought of for

gonorrhœa. And Drs. Ringer and Murrell (*Lancet*, January 6th) strongly recommend the pills as a cure for amenorrhœa. It is said, however, that permanganate of potash when made up with any readily oxidized excipient, as glycerine, has an unpleasant way of "going off." If it should deflagrate when administered *per vias naturales* it would be startling. But then it is to be said, that if this reaction is a common result of such a combination their topical application to the uterine cavity might reasonably be expected to relieve amenorrhœa.

— We have received the first number of *Science*, a new weekly of neat exterior, and twenty-six quarto pages of reading matter. It is edited by Mr. Samuel H. Scudder, and owned by a company, the president of which is President Gilman of Johns Hopkins University. *Science* will be published at Cambridge. According to the prospectus it "will be a strictly independent journal, devoted to the advancement of knowledge and scientific research in America, and will be technical only in so far as the subject-matter may require. On the one hand it will claim the support of scientific men as the most available channel for the early publication of condensed results of their researches, and on the other it will appeal to the intelligence of the general public by its careful exposition of scientific discovery, while both will profit by its weekly reports of scientific progress, drawn from original sources of the very latest date, and from all parts of the world."

— The Medical Record Visiting List or Physician's Diary is one of the neatest and handiest offered to the profession.

— It is said that the czar of Russia has broken up the medical college for women at St. Petersburg, which was founded by his father, the late czar.

— Block, of Dantzic (quoted in Annals of Anatomy and Surgery, December, 1882), has been experimenting with a view to ascertaining the feasibility of operative surgery upon the thoracic viscera, and reports that he has a number of times opened the thorax in dogs and sewed up purposely made rents in the heart muscle after laying the pericardium freely open; in a considerable number of cases the animals survived this operation. He also resected the lungs in a large number of dogs, removing from one to four lobes, and several of the largest animals lived for months.

NEW YORK.

— On February 5th Mr. Seymour Haden gave the first of two lectures at Chickering Hall on the principles and practice of etching. In speaking of his own work as an etcher he said, "It could hardly be expected that an amateur could take it up successfully. It may be said that I am an amateur, but I wish to say that I began the study of art the day I began the study of medicine, and have continued the study ever since. While my days were spent in the dissecting room, my nights were spent in the schools of art. To that I may add my experience as a collector, and also the fact that I never published an etching until I was an expert."

— One effect of the adoption of the new Code of Ethics last year, and the effort to sustain it at the recent meeting of the State Medical Society, has been the introduction into the Legislature at Albany of a most outrageous bill, which provides that no State or county medical society shall adopt any rule or regulation which shall prevent members of such societies from consulting with any legally authorized practitioners of any school, and that all rules or regulations prohibiting such consultations shall be null and void. This extraordinary measure was received with no little favor by a large number of the Solons present, but some of them had sufficient sense of decency to secure a postponement of action in regard to it.

— At the meeting of the New York Society of Medical Jurisprudence, held February 8th, Dr. William A. Hammond read a paper on Intellectual Monomania, with Depression, in its Medico-Legal Relations, as Illustrated by the Case of Dubourque, the Fourteenth Street Assassin. Dubourque, it will be remembered, is the maniac who stabbed several women, one of them fatally, on Fourteenth Street, New York, when crowded with pedestrians, in October last. This disorder, Dr. Hammond said, differed in its symptoms and causes from both emotional insanity and melancholia, and one of its most striking characteristics was the patient's delusion that he was the victim of persecution. It was often the case that he believed that whole bodies of men were banded together against him. When examined after his arrest Dubourque spoke glibly on other subjects than that of his crime, both in French and English, and, as it was evident that he was shamming for a purpose, Dr. Hammond decided that he was insane, but was able to distinguish between right and wrong, and therefore amenable to punishment. His mania, as well as that of his father, with whom he walked the streets with placards accusing the government of having cheated them out of a large inheritance, was caused by the disappointment of not receiving an expected legacy from the old man's brother, who died in California. The legal question suggested by this case, Dr. Hammond said, was whether or not the city was liable for damages when it allowed a man like Dubourque, who had been, previous to his last exploits, arrested for an attempted homicide, and acquitted on the ground of insanity, to go at large.

An interesting discussion of this question by the lawyers present followed. Mr. Livingston said that as the corporation owed protection to all citizens, it was liable for a neglect of this duty. Mr. Miller thought that the city could be prosecuted for criminal negligence for acts committed by irresponsible individuals, of whose irresponsibility, as in Dubourque's case, it had constructive notice. Mr. Brooks said the acquittal of a criminal on the ground of insanity was not such notice to the corporation as would serve for the grounds of an action for damages, but that the person whose duty it was by law to commit a declared lunatic to an asylum might be liable for injuries consequent on his neglect of such duty. Mr. Linderburg believed that it was quite within the discretion of a judge, who might be satisfied that a man who was acquitted on

the ground of insanity at the time his crime was committed and might have afterwards become sane, to discharge him, and that in any event a magistrate could not be prosecuted for a judicial act in an action for damages. In this opinion several other legal gentlemen coincided. Dr. Spitzka, who also examined Dubourque, differed from Dr. Hammond in his opinion that the murderer's knowledge of right and wrong was not obliterated by his disease, which was General Paresis, at the time he stabbed the women. His examination convinced him that he was wholly irresponsible, and that his insanity was incurable.

— A somewhat similar case to that of Dubourque has just occurred in Bellevue Hospital, although in the latter instance the insanity seemed to be clearly attributable to alcoholism. On January 31st a man by the name of Mahon, an engineer by occupation, was admitted to the hospital apparently on the verge of delirium tremens. Under the treatment to which he was subjected he improved so much, however, that he was discharged the following day. He then immediately commenced drinking heavily again, and on February 3d was readmitted to the hospital. He was at first confined in a cell, but the next morning was given the freedom of the corridor and waiting-room. The keeper in charge did not seem to anticipate any danger, although the man was very despondent, and kept muttering to himself about being pursued by persons who wished to kill him. Suddenly he became violent, exclaiming, "There he is. He has a pistol, and is going to murder me," and before he could be secured he had fractured the skulls of a fellow-patient and the keeper with a three-legged stool and an earthenware spittoon, which were in the corridor. The patient, who was sitting quietly at a table reading at the time, died instantly, but it is thought that the keeper may possibly recover.

— By the will of the late Samuel Willets a bequest of $50,000 each is made to the Hospital for the Relief of the Ruptured and Crippled and to the New York Infirmary for Women and Children, of both of which institutions he was president at the time of his death. He also left $50,000 to the New York Hospital, and $5000 each to a number of dispensaries and other medical charities.

— The State Board of Charities has declared that the insane asylum at Mineola, Long Island, is overcrowded, and directed that the buildings must either be enlarged or some of the patients removed to other institutions.

— According to the newspapers a negro woman, Caroline Townsend, has lately died at Flushing, L. I., at the remarkable age of one hundred and twelve years.

— The proceeds of the annual Purim charity ball (Jewish) at the Academy of Music will this year be devoted to the support of Mount Sinai Hospital.

— Mr. William E. Dodge, one of the most benevolent citizens of New York, died suddenly on the 9th of February. The last time that he was out it was to visit a building which he had recently purchased, and had been fitting up for a home for inebriate women.

Correspondence.

CONCERNING NEWPORT, R. I., AS A RESORT FOR CONSUMPTIVES.

MR. EDITOR, — In the *Sanitarian* of January 18th and 25th, an article headed Newport in Winter gives statistics in reference to pulmonary consumption, and says, among other things, "Newport has been recommended by eminent physicians as a desirable winter resort for consumptives, and they present facts and figures," etc., etc.

These "facts and figures" are compiled by Dr. H. R. Storer, of Boston, and so far as they alone are concerned are perfectly correct. It is shown that Newport has a smaller ratio of mortality from consumption, both as compared to the population and the total mortality from all causes, than any other locality in Rhode Island; and, further, that in this State the ratio of mortality is smaller than anywhere in this country except the Northwestern States. The only objection to this finding lies in the fact that Newport as a city is not the only one of its size on the Atlantic coast with such small percentage of deaths as mentioned (12.92 per cent. of all causes).

What appears to me to be a grave error, and one which in its bad effects may become far-reaching, are the conclusions certain to be drawn from this recommendation. The errors and false conclusions are as follows: —

Certain constituents of climate and soil favor the development, — are the *causes* of consumption. Certain other constituents favor the arrest, more or less permanent, of consumption. These may be said to be some of the elements of repair, of *cure*.

Secondly, it by no means follows that because a certain section of country does not favor the development of consumption in its inhabitants therefore is the climate of that section suitable for the cure or arrest of consumption. Neither is it an argument against that particular section, but it is dangerous doctrine to preach.

Now I put up two propositions, and will endeavor to prove them as tersely as possible: —

(1.) That the climate and soil do not particularly favor the development of phthisis among its inhabitants.

(2.) That the climate and soil are inimical to the arrest or cure of phthisis in any of its forms.

Proposition I. The figures show a relatively small mortality from phthisis, and this speaks for itself. Of all causes by which the *exposed* on the one hand (overcrowding and bad food), and the *sensitive* on the other (hereditarily vulnerable with irritable mucous membranes and skins), are found to develop phthisis, subsoil moisture is the greatest. This has been abundantly proven by Dr. Bowditch and Dr. Buchanan. The original character of the soil and the drainage, natural and artificial, determine the quantities of surface or ground-water likely to be retained. Health reports from Newport show that both as to soil and drainage the city is as near perfection as any city on the Atlantic. Moreover, Newport is not a city of such dimensions as to make overcrowding a prominent factor. The population of 16,000 is not remarkable, nor do we hear much of poverty; much, however, do we hear of wealth and general comfort.

Proposition II. We have the statistics of the mortality from phthisis among the comparatively well-to-do

inhabitants. We have none of arrest or cure of phthisis of patients who have gone there, nor of those who reside there. Are we at liberty to imagine that the mortality showing is likewise a showing of the whole number of those stricken with consumption or something akin to it?

The chief elements of climate are pressure, temperature as to means and range, humidity, intensity of sunlight, electricity, the production of ozone, and the admixtures in the air. Without going into detail as to what we now know of the effect of these various constituents upon the several forms of consumption, let me unhesitatingly say that *dryness* is the chief desideratum. And what may be called a dry atmosphere? According to Vivenot a climate may be called dry when below fifty-five per cent. of saturation (one hundred per cent. represents saturation); moderately dry, fifty-six to seventy per cent.; moist, seventy-one to eighty-five per cent.; excessively moist, eighty-six to one hundred per cent.

Now we do not find fault with a climate in which the mean relative humidity is of the moderately dry (or moderately moist, which is the same thing), provided it is accompanied by a warm (not hot) or cool climate, and a moderate monthly and annual range. This therapeutical law is absolute for a certain class of patients: dryness with or without high altitude, which excludes equability in our zone; for another class, the "irritable," equability of temperature with dryness, or, rather, moderate dryness, because equability and dryness are not found in anything but relative company, if I may so express myself. Now, let us see where Newport stands as to relative moisture and equability of temperature. I quote from the Signal Service Report of 1880: —

MONTHLY AND ANNUAL MEAN RELATIVE HUMIDITY.

July	73.4	January	76.5	
August	77.2	February	74.0	
September	77.6	March	70.2	Annual
October	74.3	April	70.4	Mean, 74.7
November	76.1	May	73.4	
December	80.3	June	73.0	

Annual mean of seventy-four per cent. of saturation; one month — and that a *winter* month — eighty per cent., and only twice as low as seventy per cent.

Now as to equability, shown by the —

MONTHLY AND ANNUAL RANGE.

July	32° F.	January	46° F.	
August	32°	February	53°	Maximum 86°
September	35°	March	45°	Minimum 2°
October	50°	April	37°	Annual range,
November	50°	May	47°	84°
December	51°	June	37°	

Equability of temperature may be said to exist, broadly speaking, where monthly ranges are below 25° F., and the annual range not above from 30° F. to 40° F. (maximum 80° F., minimum 40° F.)

Here we have for Newport monthly ranges of 32° F., and from that up to 53° F., and an annual fluctuation of eighty-four degrees. In short, not one of the elements of climate which are suitable for consumptives.

But this is not all. Fully granting the comparative immunity of the inhabitants of Newport from consumption, let us look to what we may expect of acute inflammations of the respiratory organs. The Rhode Island Registration Report for 1880 gives the total number of deaths from pneumonia and congestion of lungs in Newport city as 11, in the Newport County towns only 7, and a total for sixteen years in Newport County of 230 deaths. Bristol County has 171 deaths from the same cause. These figures are neither remarkably high nor very low.

The point I wish to make in connection with acute inflammations of the lungs is this: The concurrence of excessive moisture, sudden fluctuations of the thermometer, and high winds favor the development of these troubles. To the chronic cavity or infiltration of a consumptive acute inflammations are in the nature of an exacerbation of the original trouble. The climatic conditions which assist in bringing about this state of affairs may be found at Newport, "recommended as a winter resort for consumptives." Further comment is unnecessary. Respectfully yours,

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A "VINDICATIVE" LETTER.

MR. EDITOR, — Your announcement and comment on my Manual in your issue of January 25, 1883, page 89, appears to my humble judgment anything but fair. You take the liberty in describing the color of paper, odor, etc. I feel assured you have never participated in country printing. I presume you are not aware that this little "rag-edged pamphlet" cost fully as much as a handsomely printed octavo volume in the enlightened city of Boston. The two abstracts that you refer to, on pages 19 and 22, was eagerly looked for. Lord Bacon says, "Read not to contradict, to confute, nor to believe and take for granted, nor to find talk and discourse, but to weigh and consider. The mind which is searching for truth ought to remain in a state of suspense until superior evidence on one side or the other incline the balance of the judgment and determine the probability or certainty to the one side." "But yet this truth being never so certain, never so clear, he may be ignorant of either, of all of them, to take pains to employ his faculties as he should to inform himself about them." Locke.

I here publicly profess I will to the end of my days acknowledge as the greatest obligation that any person can confer upon me if, in the spirit of meekness, he will point out to me any error or enthusiastical delusion into which I have fallen.

I have admitted in the preface of the Manual that for its origin I am indebted to "Joh. Fred. Faselii Elementa Medicinia Forensis." I will concede I am guilty of negligence and rational hypothesis for not commuting the above-mentioned abstracts into the latest advancement of science. I despise deceit, and lay no claims to superior wisdom and infallibility, but I hate to be made out an unwarrantable quack. I have but one consolation, "That unwarlike learning which is nourished by ease, and flourishes by praise and reward, which sustains not vehemency of opinion, and is the sport of artifices and impostures, is overthrown by opposition." Lord Bacon.

There is a German proverb, "Thue recht und scheue niemand." I will always avow what is due to science. As Baron Humboldt says: "Ce servit faire tort au progrès des sciences que de ne pas vouloir abandonner des théories contraires aux observations que presente l'état actuel de nos connoissances."

I never sought eminence, but I have taken a solemn pledge before the altar of Galen to try and honorably act in the progress of my chosen profession. Now what a legacy is there for me? What a reward for all that is true and noble to me, and for all that is softest and best in a physician's life? A bad name, a pledgeist, a literary quack. I can only say as Iago in Othello: —

> "He that filches from me my good name,
> Robs me of that which not enriches him,
> And makes me poor indeed."

I make these observations, sir, not with any desire to make you deviate by an hair's breadth from the path of duty which you are bound to tread as editor of a scientific medical journal, but I make them to pray, to entreat, to beseech you, with the last stroke of my pen, hereafter not to bestow your opinion upon speculative theories and visionary ideas, but to try and accurately weigh in every particular the character and standing of man.

C. H. VON KLEIN.

HAMILTON, OHIO, *February* 8, 1883.

THE VAGINAL DOUCHE.

MR. EDITOR, — Having seen in your journal several illustrations of apparatus for using the vaginal douche, I desire to give a description of one I have used for several years, and which I believe to be equally efficacious, though more convenient and simple than any other.

It consists of a small cot (made of ordinary rough lumber), three feet long and two feet wide, the upper surface of which is concave from side to side and slopes from behind forwards with a fall of about two inches. It is made low, so that it can be pushed under the bed when not in use, and for that purpose I put rollers under the feet. A piece of rubber cloth, extending over the front, is laid on the top of the cot, and a common tin pan placed on the floor in front of it. I always use the fountain syringe with a capacity suitable to each case, which can be refilled, if necessary, by the patient or an attendant. Closing the stop-cock while filling the syringe, it is opened to expel the air, and then closed again. Then the patient, with the nozzle of the syringe in her hand, lies on the cot, places her feet, one on each side of the front edge, and a pillow under her head. After introducing the nozzle, the stop-cock is opened, and the injection, as it runs from her, must run into the pan.

Very respectfully yours, D. M. APPEL,
Assistant Surgeon U. S. Army.

FORT ELLIOTT, TEXAS, *February* 3, 1883.

Miscellany.

SCHOOLS OF MEDICINE.

THE difficulty in getting before the public the facts concerning the non-sectarian position of rational medicine makes it cause for satisfaction whenever a correct presentation of the attitude of the medical profession is made in any leading periodical. From a paper by Dr. R. O. Beard in the *Popular Science Monthly* for February, 1883, we make the following quotation: —

"Nothing is so popular as prejudice, and no prejudice so popular as that resting upon a supposed scientific basis, or backed by reputed scientific authority. Always obstructive to the spirit of progress, it is peculiarly so when related to a subject so closely concerning the interest of the people as the study and treatment of disease. In these physically degenerate days the avoidance or remedy of the thousand 'ills which flesh is heir to' is a question of well-nigh universal import. The urgency of this common need offers a partial reason for the adoption and perpetuation, by the public mind, of the differences which are supposed to exist between the two great schools of medicine, while, at the same time, it measures the greatness of the misfortune of the fact.

"Rooted in the professional ignorance and bigotry of almost a century ago, fostered by the bitter rivalries and exclusivism of opposing theorists, these differences have been taken up and fed by popular opinion, until they seriously embarrass the progress of medical knowledge, and tend to destroy all faith in the science and art of healing.

"The medical fraternity at large, and of both schools alike, is responsible for this unfortunate condition of affairs. When professional men who, supposably, represent the best phases of liberal thought and scientific culture lend their names to the partisanship of mere theory, and array themselves under sectarian titles which signify their adherence to an exclusive dogma, it is small wonder that the laity should follow in their footsteps and cast their views into the yet narrower mould of unreasoning prejudice. And, as professional hands have sown this seed of error, it is they who must gather its barren harvest and uproot the tares of false opinion from the popular mind."

CONVALLARIA MAJALIS. THE OTHER SIDE.

DR. B. STILLER, in the *Wiener Medizinische Wochenschrift*, adds his experience to the observations on convallaria majalis, which, it will be seen, is of different tenor from that of the Russians, who introduced it, and of M. Germain-Sée, who first made it prominent.

Seventeen persons were treated by Stiller, some for relapses, making a total of twenty-one cases, fifteen of whom were males; the ages varied from eleven to seventy years, and the diseases were four cases of mitral insufficiency with aortic regurgitation, one of pure mitral regurgitation, five of regurgitant and stenotic mitral disease, four of mitral stenosis, five of weak heart with dilated left ventricle, and, lastly, two cases of Graves' disease, altogether a motley group of cardiac diseases. Out of the twenty-one cases seventeen gave absolutely negative results with convallaria; there was not the least influence on the frequency or rhythm of the heart's action. Some of these cases proving intractable to convallaria were subsequently benefited by digitalis; two individuals experienced a certain degree of the diuretic effect of the new drug without any of the other vaunted phenomena, not even the dropsy being diminished; two patients underwent decided improvement in most of the cardiac symptoms during the use of the new medicine, but these cannot outweigh the large balance of negative results.

It will be remembered that the advocates of this drug claimed for it all the advantages of digitalis in regulating the frequency and rhythm of the heart beats, increasing the strength of the contractions, and raising the blood pressure, and without any of the dangers of the cumulative action of digitalis.

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 10, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	618	206	16.18	16.99	4.85	3.27	.16
Philadelphia	846,984	371	132	12.69	—	5.67	2.16	1.89
Brooklyn	566,689	259	105	17.86	17 86	6.08	6.84	—
Chicago	503,304	206	98	18.43	16.49	7.76	2.91	1.94
Boston	362,535	189	68	17.46	10.58	7.41	2.12	—
St. Louis	350,522	190	72	20.06	14.81	6.35	7.94	—
Baltimore	332,190	225	104	43.99	4.44	13.33	5.33	18.66
Cincinnati	255,708	119	41	14.54	25.66	1.71	4.27	—
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	86	30	9.28	15.08	2.32	3.48	1.16
Pittsburg (1883)	175,000	60	20	20.00	24.90	4.64	—	—
Buffalo	155,137	64	17	28.08	9.36	10.92	9.36	—
Milwaukee	115,578	41	25	19.52	9.76	9.76	4.88	—
Providence (1883)	116,755	31	11	16.12	6.45	3.23	—	—
New Haven	62,882	26	12	7.69	46.15	—	—	—
Charleston	49,999	23	11	8·69	17.39	—	—	—
Nashville	43,461	21	7	38.10	4.76	4.76	—	4.76
Lowell	59,485	20	4	10.00	25.00	5.00	—	—
Worcester	58,295	25	13	12.00	28.00	8.00	4.00	—
Cambridge	52,740	16	8	18.75	18.75	12.50	6.25	—
Fall River	49,006	20	10	20.00	5.00	15.00	—	—
Lawrence	39,178	7	4	14.29	14.29	14.29	—	—
Lynn	38,284	22	7	13.63	9.09	4.54	—	—
Springfield	33,340	9	2	11.11	11.11	—	—	—
Salem	27,598	—	—	—	—	—	—	—
New Bedford	26,875	14	2	7.14	21.42	—	—	—
Somerville	24,985	8	2	25.00	12.50	25.00	—	—
Holyoke	21,851	15	7	33.33	20.00	13.33	13.33	—
Chelsea	21,785	9	3	11.11	33.33	11.11	—	—
Taunton	21,213	7	2	—	—	—	—	—
Gloucester	19,329	9	5	—	22.22	—	—	—
Haverhill	18,475	7	4	14.28	42.84	14.28	—	—
Newton	16,995	—	—	—	—	—	—	—
Brockton	13,608	2	0	—	—	—	—	—
Newburyport	13,537	1	1	—	—	—	—	—
Fitchburg	12,405	2	0	—	—	—	—	—
Malden	12,017	1	0	—	—	—	—	—
Twenty-four Massachusetts towns	178,929	49	18	22.44	10.20	8.16	4.08	—

Deaths reported 2767 (no report from New Orleans): under five years of age 1051: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 520, consumption 400, lung diseases 374, diphtheria and croup 180, scarlet fever 99, small-pox 63, typhoid fever 33, diarrhœal diseases 26, cerebro-spinal meningitis 24, measles 23, whooping-cough 23, malarial fevers 19, erysipelas 16, puerperal fever 13, typhus fever one. From *typhoid fever*, Philadelphia eight, New York and Pittsburg four each, Chicago, Boston, and Cincinnati three each, Baltimore and Buffalo two each, District of Columbia, Providence, Charleston, and Wakefield one each. From *diarrhœal diseases*, Boston seven, New York six, St. Louis three, Brooklyn, Baltimore, Cincinnati, and Nashville two each, Chicago and District of Columbia one each. From *cerebro-spinal meningitis*, New York seven, Chicago three, St. Louis, Milwaukee, and Lynn two each, Baltimore, Buffalo, Providence, Charleston, Nashville, Lowell, Holyoke, and Marblehead one each. From *measles*, New York 15, Nashville two, Brooklyn, Chicago, Cincinnati, Pittsburg, Providence, and Chicopee one each. From *whooping-cough*, New York 10, Brooklyn and Pittsburg three each, Cincinnati two, Chicago, St. Louis, New Haven, Fall River, and Chicopee one each. From *malarial fevers*, New York nine, Brooklyn four, St. Louis and Baltimore two each, Chicago and New Haven one each. From *erysipelas*, New York four, Philadelphia and Boston three each, Brooklyn and Buffalo two each, Cincinnati and Providence one each. From *puerperal fever*, St. Louis three, Chicago and Boston two each, Brooklyn, Cincinnati, Nashville, Springfield, New Bedford, and Peabody one each. From *typhus fever*, Baltimore one.

One hundred and seventy-seven cases of small-pox were reported in Baltimore, Pittsburg three, Lawrence one; diphtheria 31, scarlet fever 20, typhoid fever 10, in Boston; scarlet fever 17 and diphtheria seven in Milwaukee.

In 41 cities and towns of Massachusetts, with a population of 1,052,318 (population of the State 1,783,086), the total death-rate for the week was 21.25 against 20.78 and 20.32, for the previous two weeks.

In the 28 great towns of England and Wales, with an estimated population of 8,620,975, for the week ending January 27th, the death-rate was 22.4. Deaths reported 3703: acute diseases of the respiratory organs (London) 369, whooping-cough 129, scarlet fever 87, fever 59, measles 52, diarrhœa 37, diphtheria 36, small-pox (London eight, Nottingham, Sheffield, and Newcastle one each) 11. The death-rates ranged from 12.7 in Brighton to 31.1 in Liverpool; Leicester 16.1; Birkenhead 18.2; London 20.4; Birmingham 22.9; Leeds 24.3; Sheffield 27.2; Manchester 28.9; Sunderland 30.6. In Edinburgh 21.2; Glasgow 29.7; Dublin 34.9.

The meteorological record for the week ending February 10th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
February, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 4	30.069	32	43	20	88	74	71	78	NW	W	W	4	20	9	Sleet.	O	F	—	—
Mon., 5	30.246	27	36	19	77	65	60	67	NW	SW	W	5	13	12	O	F	C	—	—
Tues., 6	30.323	27	37	15	59	42	68	56	W	SW	W	6	8	14	C	O	L S	—	—
Wed., 7	29.733	35	44	23	94	59	77	77	S	W	W	3	26	7	R	C	C	—	—
Thurs., 8	30.135	28	36	23	51	50	58	53	W	W	SW	9	22	10	C	C	C	—	—
Fri., 9	30.248	32	41	25	64	38	67	56	SW	W	W	7	21	12	F	O	C	—	—
Sat., 10	30.600	18	30	12	48	56	67	57	NW	NW	S	12	5	4	C	O	O	—	—
Means, the week.	30.051	28	44	12				65										—	.63

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM FEBRUARY 9, 1883, TO FEBRUARY 16, 1883.

BROWN, JOS. B., lieutenant-colonel and surgeon. Detailed as member of board for examination of assistant surgeons for promotion and candidates for admission into the medical corps, U. S. Army, to convene at New York City on March 1, 1883. Paragraph 1, S. O. 35, A. G. O., February 10, 1883.

CLEMENTS, BENNETT A., major and surgeon. Detailed as member of board for examination of assistant surgeons for promotion and candidates for admission into the medical corps, U. S. Army, to convene at New York City on March 1, 1883. Paragraph 1, S. O. 35, A. G. O., February 10, 1883.

JANEWAY, JOHN H., major and surgeon. Detailed as member of board for examination of assistant surgeons for promotion and candidates for admission into the medical corps, U. S. Army, to convene at New York City on March 1, 1883. Paragraph 1, S. O. 35, A. G. O., February 10, 1883.

TOWN, FRANCIS L., major and surgeon, is relieved from duty at Fort Walla Walla, and will report to the commanding officer, Vancouver Barracks, for duty as post surgeon. S. O. 1, Department of the Columbia, January 27, 1883.

WOODWARD, J. J., major and surgeon. The extension of leave of absence on account of sickness, granted October 6, 1882, is further extended six months on account of sickness. Paragraph 9, S. O. 34, A. G. O., February 9, 1883.

TAYLOR, MARCUS E., captain and assistant surgeon. So much of S. O. 20, A. G. O., January 24, 1883, as directs him to report in person to the commanding general, Department of the East, is amended to direct him to report in person to the commanding officer, David's Island, New York Harbor, for duty at that station. Paragraph 2, S. O. 33, A. G. O., February 8, 1883.

THE "HAMMOND PRIZE" OF THE AMERICAN NEUROLOGICAL ASSOCIATION. — The American Neurological Association offers a prize of five hundred dollars, to be known as the William A. Hammond Prize, and to be awarded at the meeting in June, 1884, to the author of the best essay on the *Functions of the Thalamus in Man*.

The conditions under which this prize is to be awarded are as follows: —

(1.) The prize is open to competitors of all nationalities.

(2.) The essays are to be based upon original observations and experiments on man and the lower animals.

(3.) The competing essays must be written in the English, French, or German language; if in the last, the manuscript is to be in the Italian handwriting.

(4.) Essays are to be sent (postage prepaid) to the Secretary of the Prize Committee, Dr. E. C. Seguin, 41 West Twentieth Street, New York City, on or before February 1, 1884; each essay to be marked by a distinctive device or motto, and accompanied by a sealed envelope bearing the same device or motto, and containing the author's visiting card.

(5.) The successful essay will be the property of the Association, which will assume the care of its publication.

(6.) Any intimation tending to reveal the authorship of any of the essays submitted, whether directly or indirectly conveyed to the committee or to any member thereof, shall exclude the essay from competition.

(7.) The award of the prize will be announced by the undersigned committee, and will be publicly declared by the president of the Association at the meeting in June, 1884.

(8.) The amount of the prize will be given to the successful competitor in gold coin of the United States, or, if he prefer it, in the shape of a gold medal bearing a suitable device and inscription.

Signed, { F. T. MILES, M. D., *Baltimore.*
J. S. JEWELL, M. D., *Chicago.*
E. C. SEGUIN, M. D., *New York.*

No essay of sufficient originality having been sent to the committee this prize is again offered to universal competition.

E. C. SEGUIN, *Secretary.*

AN ARMY MEDICAL BOARD has been ordered to assemble at the Army Building, corner of Houston and Greene Streets, New York City, New York, March 1, 1883, for the examination of such persons as may be properly invited to present themselves before it as candidates for appointment in the medical corps of the army, and will probably continue in session about three months.

All candidates for appointment in the medical corps must apply to the Secretary of War for an invitation to appear for examination. The application must be in the handwriting of the applicant, must state date and place of his birth and place and State of which he is a permanent resident, and must be accompanied by certificates based on personal acquaintance from at least two persons of repute as to citizenship, character, and moral habits; testimonials as to professional standing from professors of the medical college at which he graduated should also accompany the application if they can be obtained. The candidate must be between twenty-one and twenty-eight years of age (without any exceptions), and a graduate of a regular medical college, evidence of which, his diploma, must be submitted to the board.

Further information regarding these examinations and the nature thereof can be obtained by addressing the surgeon-general, U. S. Army, Washington, D. C.

CENSORS' MEETING. — The Censors of the Suffolk District Medical Society will meet for the examination of candidates at 19 Boylston Place, on Thursday, February 22, at three o'clock.

H. C. HAVEN, *Secretary.*

SUFFOLK DISTRICT MEDICAL SOCIETY. — There will be a regular meeting of the Society on Saturday, February 24th, at 19 Boylston Place, at 7.45 P. M. Reader, Dr. J. H. Warren. Subject, Tissue-Repair. Supper at the usual hour.

H. C. HAVEN, *Secretary.*

THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. — The Society will meet at the Medical Library, 19 Boylston Place, at eight P. M., Monday, February 26, 1883. Reader, Dr. J. Orne Green. Subject, The Action of Quinine upon the Ear.

E. M. BUCKINGHAM, M. D., *Secretary.*

Original Articles.

SOME TYPHOID EPIDEMICS OF THE PAST DECADE, AND THE NECESSITY OF COMPULSORY DISINFECTION.[1]

BY MORTON PRINCE, M. D.,
Assistant City Physician, Boston.

IN this country, as I have said before, we have, fortunately, not as yet been visited by such terrible epidemics as have occurred in England and on the Continent, but it may happen at any time, the next week, perhaps, or the week after, that one of our neighboring towns, now esteemed happy in its healthfulness, may meet with a disaster which will teach us, when it is too late, the lesson we should be learning to-day.

We learn from the last report of the Board of Health that the sewage of the town of Natick, a town of over eight thousand inhabitants, is daily passing into Cochituate lake, being only opposed by a dam, through which it filters. There can be little doubt that the only thing which saves us from some extensive epidemic in this city is the vast dilution which this filth undergoes before being consumed. How long this safeguard will last no one can say. Whatever amount of sewage fails to reach the consumer of water is settling to the bottom of the lake, there to form a sediment of greater or less extent. If any one doubts this let him some day take a long stick, stand on the embankment of Charles River, and poke up the mud and filth on the bottom. It is only a difference of quantity in the two cases, not of quality.

I am willing to predict that some time in the future, unless some remedy is applied, perhaps during a season of drought, the quantity of sewage in the lake will become so great as to produce an epidemic of typhoid, which will spread throughout the city, sparing neither rich nor poor.

In the country towns to-day throughout the State the wells are commonly sunk close to the privies, into which the discharges of those sick with the fever are daily thrown, to a great extent without disinfection, to take the chances of serving as foci for future disease. In the city they are thrown into the drains. Who shall say what proportion of the cases which occur in Boston to-day are due to the spontaneous origin of the poison, and how many (if we could but trace them) are infected with the poison deposited by preceding cases in the sewers? Typhoid has been prevailing to a marked extent in this city. During the past four months there were reported 527 cases. These cases were thoroughly investigated by the Board of Health, with a view to discovering the source of infection. The milk and water supply were carefully inquired into without revealing anything suspicious, but out of 462 instances where the premises were inspected sanitary defects were found in 324 or seventy per cent. In how many of these cases was the poison cultivated in the drains, as in the experiments of Pasteur and Koch, from the produce of a previous case, and allowed to enter the apartments along with the gases of the sewer? Whatever this number is, just so many could have been prevented if the poison had been destroyed when generated.

The danger of allowing the discharges to be thrown without disinfection into the sewers may be understood from the following facts: During the past year the Board of Health, following its usual custom, examined a large number of houses in eleven different sections of the city, and occupied by all classes of the community. The examinations are made without any previous knowledge of the sanitary conditions of the houses: —

The total number examined was 491.

The number in which bad odors were found was 332.

The number in which defective drains were found was 279.

The number in which defective trapping was found was 210.

The number having offensive privy vaults was 72.

The number having offensive water-closets was 50;

While those having ventilation to the soil pipe or drain *was only* 40.

The danger from the pollution of well water in country towns may be appreciated from Mr. Ernest W. Bowditch's report on The Sanitary Condition of Nahant. After the epidemic of typhoid in that town in the summer of 1881 all, or nearly all, the wells in the town were submitted to chemical examination. Out of 190 wells examined 79 or forty-one and one half per cent. were considered to be desirable waters, while 111 or *fifty eight and one half per cent. were found to be so polluted as to be dangerous for use.*

There is no reason to suppose that the wells of other towns are in any better condition than were those of Nahant. On the contrary, Mr. Bowditch truly remarks, "the character and intelligence of a majority of the citizens and visitors preclude the possibility of the intentional omission of any sanitary care that could be considered necessary, either on individual estates or in the town as a whole, and yet here in the midst of wealth and intelligence some of the grossest instances of careless-ness, as regards the simplest sanitary matters, that can be conceived of have come to light." There can be no doubt that throughout the State are thousands of wells in a dangerous condition, polluted daily with the drainage from privies and sewers, and only awaiting the time when the germs of typhoid shall be carried into them to serve as cultivators and distributors of fever.

It has been calculated that there are 10,000 persons sick with typhoid every year in this State alone. In England Dr. Budd, as far back as 1859, calculated the number to be from 100,000 to 150,000, and Dr. Maclagan, in 1879, at 200,000. In other words, however unpoetical it may sound, we have in this State an army of 10,000 intestines discharging daily for a number of weeks each year a most virulent poison into the outer world. Is it any wonder, then, that we cannot follow each germ in its wanderings over the land, or trace back every case of fever to the germ which took root in its soil!

To what extent our total of infected cases would be swelled could we count the number of endemic cases which would be found to have their source of infection in previous cases, were efforts directed to that end, it is not in our power to say, but to an unprejudiced mind there can be no doubt that the figures would be alarming. That it is possible by proper methods of disinfection to prevent the occurrence of a large proportion of such cases is no Utopian idea, nor one that passes the bounds of probabilities.

A commission appointed by the city government in 1875 to investigate the sanitary condition of Boston,

[1] Concluded from page 175.

and composed of such men as Dr. Calvin Ellis, Dr. R. M. Hodges, Dr. Samuel Green, and the late Drs. Buckingham and Curtis, in its report declared that "our first line of defense against the spread of typhoid fever from a diseased individual consists in the proper treatment of the dejections, which are held to contain the seeds of the disease. . . . The dejections should, if possible, be rendered harmless before being thrown into the privy, and so being allowed to mingle with sewage."

The *British Medical Journal*, the leading representative of medical opinion in England, declared in a recent editorial that typhoid fever was a preventable disease, and in its epidemic form could be entirely suppressed, and could be limited to a comparatively insignificant number of sporadic cases.

Dr. Budd, over twenty-five years ago, maintained the possibility of stamping out typhoid fever, and laid down rules for observance. But Budd, to whom the credit is due of being the first to demonstrate the communicability of the fever, went farther, and claimed that every case was due to infection from a preëxisting one, and no case ever arose *de novo*. While I am at present unprepared to follow him and other eminent authorities thus far, I think there can be little doubt as to the infectious origin of a large number of cases, and if it be true, as is among the possibilities, however unsubstantiated to-day, that no case arises spontaneously, but only from some preceding case, the number of preventable cases is greatly increased, and it is not entering the realms of imagination to say that typhoid fever may eventually be reduced to a comparatively small number of sporadic cases.

Dr. Gage, in his annual address before the Massachusetts Medical Society, estimated the number of cases which occurred in Massachusetts alone between the years 1840 and 1880 in round numbers at 390,000; of these *about* 40,000 perished. As this writer says, "these are startling figures."

After a consideration of the above facts it seems to me that the conclusion is justifiable that a large proportion of these cases could have been prevented if proper precautions had been taken; or, if this be doubted, it still must be conceded by the most skeptical that the evidence is sufficiently strong to justify any reasonable means to attain this end.

I now come to the main purpose of this paper, What is the remedy for the future? I believe it is alone to be found *in legal enactments through State and local boards of health. It should be compulsory for every householder in whose dwelling a case of typhoid occurs to see that the dejections are disinfected with proper and prescribed means*, and to this end every case of typhoid should be reported to the proper local officers, who should furnish, at the public expense if necessary, efficient chemicals, such as sulphate of iron, for this purpose.

Disinfection cannot be left to the physician alone, even supposing that he can be reasonably called upon for this duty. There are many factors on his part which would, and do, operate to prevent such a measure from being carried out. Universal skepticism, with which some are endowed, as well as the general frailties of human nature, where demands are made on the time and labor of the busy practitioner, would play their part. There is also a general tendency with the physician to "take the chances," as he himself is so often obliged to do, when called upon to expose himself to contagion. On the other hand it is absolutely useless for any board of health, however able and efficient, to attempt to enforce thorough disinfection — and if not thorough it is useless — unless supported by the public sentiment of the profession and of the community at large, and aided by the willing coöperation of both. But for the enforcement of such regulations, as I have advocated in this paper, something more is necessary than the mere passing of laws. There would be required a more extensive sanitary machinery than that which we now have. It seems to me that the present statutes regarding the establishment of boards of health and health officers are too general and lax. If any town does not choose to take advantage of them their effect is void. Furthermore, by allowing the selectmen of towns to act as boards of health the benefit of experts is lost. It is to be feared that the knowledge of the average selectman in matters pertaining to sanitary science is somewhat similar to that of the famous Pickwickian character who "had a vast variety of opinions on a vast variety of subjects." It is difficult to ascertain the number of cities and towns in the Commonwealth which have regularly appointed boards or medical officers. But from information obtained at the State Board of Health and elsewhere *sixty only out of three hundred and forty-one towns* would be a fair estimate. This shows how inefficient are the existing statutes, and how necessary it is that some radical measures should be adopted in order that the object may be accomplished for which they were framed.

In the present arrangement there is lacking that general centralization which is necessary for unity of system and action. Thoroughness and efficiency can only be obtained by having similar methods of investigation and common sanitary regulations for every town.

It seems to me that some such scheme as the following is requisite. There should be a central State Board of Health, which should be yoked neither with the goddess of charity on the one hand nor of lunacy on the other. The present triple-headed monster, from which, being hybrid by nature, only sterility can be expected, should be abolished. Then every town of, say, three thousand inhabitants which possesses no local board of health should be obliged to appoint medical health officers. The remainder of the smaller towns, unless they also elect to appoint such officers, should then be grouped in districts, for each of which similar officers should be appointed. Connected with the central State Board should be sanitary inspectors, who should be medical men. Whenever a case of typhoid or other contagious disease occurs it should be reported to the local boards of health, or medical officers, who should investigate the case with a view to discovering the focus of infection. The investigation should be conducted upon a general systematic plan, established by the central board, and should always include the milk, water, food, air, drainage, habits of the people, late whereabouts, etc., etc.

If the case is one of typhoid the medical officers should see that the family in which the case occurs properly disinfects the discharges, and if the circumstances are such as to warrant it the disinfectants should be furnished at the public expense. Other diseases should be treated according to recognized sanitary requirements. The local boards of health of cities should be independent of all central authority. Whenever any extensive epidemic occurs in any part of the State, one of the State sanitary inspectors should be

sent to aid in the investigation, and the results should be publicly reported. With some such machinery as this I believe that not only would our knowledge of the ætiology of disease and the conditions of contagion be greatly enhanced, but a vast amount of sickness be prevented.

It will probably be said in objection that the time is not yet ripe for disinfection to be compulsory, and without the coöperation of the community it would be impracticable to enforce the laws. If such be the case it is not because the laws of hygiene are not sufficiently determined, but because the community has not been educated up to the present standard of sanitary science. And it is here that the medical profession should be the leader and educator of public opinion. If we are convinced of the necessity of sanitary reform, and of the enforcement of regulations for the protection of health, we should, by continued agitation and public expression, instruct the public in the laws of sanitary science, and give warning of the dangers to which it is exposed. It is to the medical profession that the public looks for guidance in these matters, and the profession should give forth no uncertain sound. It seems to me that the public can in no better way be informed of the dangers to health and of the necessity of employing proper precautions for the prevention of contagion than by some such measure as I have ventured to propose. It seems to me that its moral force alone would be incalculable, and that it would be the very best method of educating the people in sanitary matters. But it would of course require time to be thoroughly and efficiently put into operation. That it would eventually succeed I think there can be little doubt. We must remember that a large proportion of the community is ready to-day to do anything for the preservation of its health. It only waits to be assured of the reality of the dangers and of the utility of prophylactic measures.

The cost of the measures just advocated would be small, so small as to justify them on experimental grounds alone. How shortsighted seems the public policy which expends thousands, nay millions, of dollars throughout the Commonwealth to secure perfect systems of drainage while the very fountain-head of one poison, at least, is allowed to flow on, and to be carried whither chance may direct. However desirable a good system of sewerage may be, it is certainly more philosophical to destroy the very poison at its birth rather than to depend alone upon the soundness of conductors to take it away. Traps will leak, and drains will get out of order, no matter how thoroughly the work be done. And as long as this is the case, and as long as the dejections of typhoid patients are thrown without disinfection into the sewers the poison will propagate itself, and typhoid will continue with undiminished virulence.

A CASE OF CONGENITAL MALFORMATION OF THE GENITAL ORGANS.[1]

BY E. F. CUMMINGS, M. D.

On the 8th of September, 1880, an infant, apparently about three months old, was found in the city, abandoned by its parents, and was taken to the temporary home on Chardon Street. It was subsequently taken in charge by the Superintendent of Out-Door Poor, whose duty it is to provide for such children, and the medical care of it devolved upon me from that time until its death, September 11, 1882.

On examination the child was found to be healthy and normally developed, with the exception of the genital organs; these were malformed to that extent that it was impossible to accurately determine its sex, although my own opinion was that it was a case of hypospadias.

The infant was sent to board with a family in the country, and I saw it frequently during the two years in which it was under my care. The child was generally healthy, having fewer infantile troubles than the majority of children who are artificially brought up. There was no disorder in which the cause was traceable to the malformation, but in one instance, and that was an attack of acute cystitis, when the child was about eighteen months old, due to a constriction of the urethra, spasmodic in character, and a consequent retention of the urine. When my attention was first called to this difficulty, I found the patient passed but a small amount of urine at a time, and the act appeared to give rise to considerable pain. The urine was loaded with pus, and by pressure over the bladder pus could be squeezed out from the urethral opening.

At first but a very small bougie could be passed through the urethra, but by gradual dilatation it was enlarged sufficiently to admit of a double catheter. The bladder was then washed out with a weak solution of carbolic acid. This treatment was continued twice a day, the symptoms began to subside very soon, and in two weeks the patient recovered entirely from the attack and had no further trouble of the sort.

The child's death was caused by acute enteritis with convulsions. As the last sickness had no connection with the malformation as far as could be ascertained, I shall not enter into it in detail.

The child appeared to have more than ordinary intelligence, was affectionate, and, if we accept the evidence of the members of the family in which it was boarded, it was really quite a paragon of excellence. They became so much attached to it that they had the body buried in their own lot, and mourned for it as much as they would for one of their own offspring.

Shortly after the infant came under the care of the State the mother was found; but as she was unable to properly care for it she was glad to let it remain where it was. On questioning her she admitted that she was probably intoxicated at the time of the connection which resulted in conception. She was a married woman, and had had one other child, which was then living; but her husband was not the father of this one. As far as she knew there had never been any abnormal development in any of the members of her family.

In a few days after the body was buried I had it disinterred, and, although decomposition had begun, with the assistance of Mr. Walter Carl, of the class of 1883 in the Harvard Medical School, succeeded in getting a pretty good cast of the external genital organs; he also made a drawing of the parts as they appeared at that time, both of which I will pass around.

Before the autopsy several physicians saw the body, and expressed the opinion that it was a case of hypospadias.

A good idea of the external genital organs can be gotten from the cast and drawing. There is what appears to be a bifid scrotum, with well-marked rugæ, a

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, January 10, 1883.

penis of perhaps half the normal size, with a distinct glans, but no urethral opening in it. The latter is found at the base of the penis or enlarged clitoris.

The outward appearance is certainly indicative of a male child. I first made an incision into the supposed scrotum, but on dissecting found no testicle. I found, however, what I supposed to be the spermatic cord, and followed its course through the external and internal ring into the abdomen. On opening the abdomen I was surprised to find a uterus of fully the ordinary size in a child of that age, and what I supposed to be the spermatic cord was attached to the body of the uterus, and proved to be the round ligament. The walls of the uterus were thin, and the cavity, which as you will see if you examine the organ, was very much distended, was two thirds full of a viscid substance resembling lymph in appearance. There is no distinct cervix as is seen in the normal organ, and an entire absence of a vagina.

What corresponds to the os uteri is an orifice large enough to admit of an ordinary sized probe, opening into the urethra about one fourth of the distance from the neck of the bladder to the urethral opening.

The appendages of the uterus are all present, — the Fallopian tubes, the ovaries and their ligaments, and the round ligament. The ovaries, however, are misshapen, being long and narrow, and situated higher up in the broad ligament than normal.

To sum up the features of especial interest in this case, we have a malformation confined to the organs of generation; the external organs presenting more the appearance of belonging to a male than a female. The penis or enormously enlarged clitoris, the bifid scrotum or a phenomenon having the appearance of such, and the urethral opening, — all of these favor the supposition that the child was a male. On the other hand, the internal organs, the uterus and its appendages, prove conclusively that it was a female. In view of the fact, however, that the external genital organs bore such a resemblance to those of a male, I think it is safe to class this case with the so-called hermaphrodites.

I shall not enter into the cause of this malformation, as I have not studied the subject sufficiently to do it justice. If you will allow me, however, I will give you the opinion of a non-medical man, the officer who found the mother of the child after she had deserted it. On questioning her he found that the act of coition, which probably resulted in conception, was performed in a house that stood on the line between the States of Maine and New Hampshire. From this fact he argued that it was not strange that the condition of the child should be such as we found it.

A CASE OF POISONING WITH ILLUMINATING GAS.[1]

BY A. L. MASON, M. D.

A MAN apparently in the prime of life went to one of the smaller hotels in the city early in the forenoon of September 19, 1882, engaged a room, and soon retired. In the evening he was found unconscious, being supposed to have blown out the gas, and was brought by the police to the hospital in a comatose condition. The pupils were equal, contracted, and at first irresponsive to light. There was no cyanosis. The breathing was 50 to the minute and shallow. The pulse was 120 and weak. There were abundant râles in the chest. The temperature was 100.2° F. Three pints of urine, which smelt strongly of gas, were drawn by catheter. An ice cap was placed on his head, and as he could not be made to swallow, an ounce of whiskey was given every two hours by rectum.

The next morning the temperature was 104° F., pulse 132, respirations 65, and he appeared to be failing. Two pints and a half of gas-smelling urine were obtained by catheter. The bowels were evacuated, and nutritive enemata were ordered. At noon the rectal temperature was 105.8° F., and he was sponged with ice water for an hour, under which the breathing became slower, the temperature fell to 102° F., and the pulse improved. There were also reflex movements of the legs and yawning. After the bath there was some tremor, and a partial return of the previous condition. He was given hypodermic injections of brandy. In the evening the temperature rose to 104.5° F., pulse 180, respirations 52. The cold sponge bath was repeated, reducing the temperature to 103.2° F., and the pulse and breathing improved. After the bath, however, there was the same return as before to the previous condition, and the hypodermic injections of brandy were repeated. He was catheterized regularly.

The next morning, thirty-six hours after admission, the temperature was 102° F., pulse 190, respirations 40. He was given thirty grains of quinia sulphate by rectum, and bathed occasionally with cool water. The temperature, pulse, and respirations fell during the day, to rise again moderately in the evening, and the baths were omitted.

The next morning (third day) the temperature was 103° F., pulse 150, respirations 48, and the baths were resumed. Physical examination, which had been found very difficult on account of the shallow respiration and general condition, detected coarse moist râles in the right side and back, and loud friction sounds in the left side and front.

There was the usual evening exacerbation of the fever, but the next morning (fourth day) the temperature fell to 99.2° F., pulse 115, respirations 38. The right pupil was larger than the left. He was rapidly failing, and died in the course of that day, the fourth after entrance. The urine showed nothing beyond a trace of albumen.

At the autopsy, twenty-three hours after death, by Drs. Johnson and Clarke, there was found a recent fibrinous pleurisy on both sides of the chest, with about two hundred cubic centimetres of a puriform fluid in the left pleural cavity. The upper lobe of the right lung was solidified by an acute fibrinous pneumonia in the stage of gray hepatization.

This case is reported to the Society as being one of rare occurrence in this community, and is interesting as showing the complications which appear to have prevented recovery even after a lapse of time which would seem to have been sufficient for the elimination of the poison.

Of the various gases of which illuminating gas is composed carbonic oxide is mainly responsible for the poisonous effects, which are analogous to those produced by the vapors of charcoal, in France so ready and frequent a suicidal agent. Physiological researches have established the fact that carbonic oxide displaces oxygen from the blood and enters into combination

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, January 10, 1883.

with the coloring matter so that no more oxygen can be absorbed. Both the arterial and the venous blood may be of a bright cherry-red color, and this compound of carbonic oxide and hæmoglobin is not easily eliminated. Therefore its action is to be regarded as that of an irritant narcotic poison, with a special action on the nervous centres and the respiratory organs, independently of the suffocation which is due to want of oxygen. The inhalation of oxygen would seem to be indicated as a therapeutic measure, and in a number of recorded instances the transfusion of healthy blood has resulted successfully after the withdrawal of a certain portion of the contaminated fluid.

The elimination seems to be largely through the kidneys, as was shown in this case by the free secretion of urine, and its strong gaseous odor. Diabetes, mellitus, and albuminuria are frequent accompaniments.

A similar case was recorded by Dr. F. W. Draper in the last volume of City Hospital Reports, page 100.

RECENT PROGRESS IN THE TREATMENT OF THORACIC DISEASES.

BY F. I. KNIGHT, M. D.

ARGUMENTS IN FAVOR OF THE THEORY OF DILATATION OF THE HEART AS THE CAUSE OF CARDIAC HÆMIC MURMURS, AND OF THE APPENDIX OF THE LEFT AURICLE BEING THE PRIMARY SEAT OF THIS MURMUR.

DR. GEORGE W. BALFOUR read an interesting communication on this subject before two societies last summer.[1] He has been led to adopt the theory of dilatation of the heart as the cause of cardiac, hæmic, or chlorotic murmurs, (1) *because it seems to be the only one capable of reconciling the various discrepant hypotheses regarding the origin of these murmurs.* This theory is fraught with most important instruction on the one hand, and with a no less momentous warning on the other; because if it be true there is no longer any real distinction between functional and organic murmurs, and a murmur can only be regarded as functional when it is found to have been curable. Moreover, if functional (chlorotic) murmurs are really due to dilatation, as these murmurs are known to disappear in by far the larger number of cases, we thus obtain the important generalization that dilatation of the heart is a curable disease. The aortic orifice is the classic position of the hæmic murmur, but this hypothesis is totally at variance with the now well-known fact that the hæmic murmur at its first appearance, though it is a basic murmur, is not propagated along the aorta or into the carotids, and has its maximum intensity in the neighborhood of the pulmonary artery. On the other hand, Marchall Hughes's idea that the pulmonary artery is itself the seat of the murmur is untenable, because there is no possible cause of murmur in the pulmonary artery in such cases which is not equally operative at the aortic orifice, or, indeed, more so; while the universally recognized basic position of the primary hæmic murmur completely excludes Parrot's theory that it originates at the tricuspid orifice. Stokes is the only British authority who recognizes the possibility of the hæmic murmur being occasionally mitral in position. Thus we have each of the four orifices of the heart described in turn by most competent authority as the point of origin of the hæmic murmur, and each of them discarded as incompetent because inconsistent with actual facts in individual cases. Considering the unanimity which prevails amongst all cardiac authorities in regard to organic murmurs, there can be but one explanation of this extraordinary discrepancy as to the hæmic murmur, and that is that it is a murmur which may be audible in all the various positions described.

(2.) The theory of cardiac dilatation, as the cause of the hæmic murmur, is thoroughly *consistent with the results obtained by experimental investigation.* When the late Dr. Marshall Hall was engaged in investigating the effects of the loss of blood upon the system, he observed that during the reaction subsequent to such loss the action of the heart was "accompanied by a peculiar noise resembling that of the saw or of the file, termed by the French *bruissement*, and very discernible on applying the ear to the chest." This *bruissement* Marshall Hall distinctly recognized as identical with the chlorotic murmur, and he accepted its artificial production by loss of blood as a clear proof of the purely hæmic character of the murmur.

(3.) The theory of hæmic murmurs being due to cardiac dilatation is *perfectly consonant with clinical experience.* Wunderlich and Friedreich have described the chlorotic heart as dilated; while Beau, Bamberger, and Stark have adopted the more rational view that it is hypertrophied as well as dilated; and so well established does this view seem now to be, that Dr. Heitler, of Vienna, one of the most recent writers on cardiac disease, speaks of the dilated hypertrophy of the heart as a well-known and acknowledged fact. As the heart dilates the mitral and tricuspid valves become incompetent, and the resulting regurgitation gives rise to murmurs. The regurgitation through the tricuspid produces undulations in the jugular veins, and the abnormally large ventricular blood-waves, coupled with the abnormal friction of the spanæmic blood at the arterial orifices, give rise to systolic murmurs in the aortic and pulmonary areas, which are also propagated along the carotids, and may be heard on the slightest compression in every artery in the body.

Thus in advanced chlorosis we have murmurs in every cardiac area — the earliest indication of any lesion of the heart being an accentuated pulmonary second, due to loss of tone of the left ventricle. Dr. Balfour is sure that all agree with Hayden that the primary cardiac hæmic murmur is basic; that it is not prolonged in any special direction, but radiates round the pulmonary area, in the neighborhood of which its position of maximum intensity lies. It has already been pointed out that there are in chlorosis no causes of murmur operative at the pulmonary orifice which are not at least as active at the aortic opening, so that a pulmonary murmur would certainly be accompanied by an aortic murmur also, and the latter would, of course, be propagated along the course of the aorta, and more or less distinctly into the carotids. This primary murmur cannot, therefore, be pulmonary; and, indeed, on careful examination, its position of maximum intensity is found not to be over the pulmonary artery at all, but from one to two inches to the left of the sternum, in the second interspace. In this position this murmur is to be detected at its

[1] Edinburgh Medical Journal, October, 1882.

very earliest appearance, quite to the outside of the pulmonary artery; here, too, Dr. Balfour rarely fails to detect, at least during expiration, some faint pulsation.

A basic systolic murmur, occupying precisely the position of the primary chlorotic murmur, is not unknown in other forms of cardiac dilatation, and it has been long recognized as of common occurrence in cases of mitral stenosis, in which also a pulsation in the second left interspace, due to the appendix of the left auricle, is of no infrequent occurrence. Naunyn proved that this depended upon mitral regurgitation.[1] The fluid veins formed at the mitral orifice impinge upon the tense auricular wall and throw it into sonorous vibrations, which are conveyed to the chest wall by the appendix of the left auricle, which lies in contact with it at the base of the heart. Naunyn's views have been accepted by all recent authorities. The basic position and auricular character of a mitral regurgitant murmur in certain cases is therefore an acknowledged fact. That the primary cardiac hæmic murmur has a similar origin seems to be proved by these facts: (1.) In chlorosis the heart is dilated and hypertrophied, and the primary murmurs are certainly not arterial in character. (2.) The position of maximum intensity of the primary hæmic murmur and of Naunyn's murmur is precisely the same; and (3) the graphic record of the pulsation in both classes of cases is similar, and as it is known to be auricular in the one it is most probably auricular in the other also, especially as it is certainly neither ventricular nor belonging to the conus arteriosus. The dilated condition of the heart, even in the very earliest stages of chlorosis, is to be inferred from the apex-beat being either entirely absent or only faintly perceptible, not in the usual position but just beneath the lower part of the sternum. This is due to the dilatation of the right ventricle, which dilates *pari passu* with the left ventricle, and, like a water-cushion, separates it from the chest wall, leaving the dilated appendix of the left auricle the only part of the left side of the heart in contact with the chest wall. The peculiar position of the primary hæmic murmur is no doubt largely, if not wholly, due to this. Shortly after the appearance of the primary hæmic murmur a tricuspid murmur and jugular undulation are found to be developed. This is naturally accompanied by a pulmonary and also by an aortic systolic murmur, the active cause in the production of both these murmurs being the large blood-waves sent on by the dilated and hypertrophied ventricles. The aortic murmur is, of course, propagated into the carotid arteries. About the same time we also have a systolic murmur in the mitral area; but this is probably due to the right ventricle being now so dilated that its apex occupies the position of the left apex in health. It is only rarely, and chiefly in a peculiar class of cases, that we have an opportunity of watching the gradual development of the hæmic murmur from area to area, but we all have frequent enough opportunities of tracing the involution of this murmur; and, if carefully observed, it will be found to die off precisely in the reverse order to that which I have described, the venous hum being the last to disappear.

With a short auricular appendix it is, of course, quite possible that the primary hæmic murmur may be pulmonary, or aortic, or even tricuspid in character. But, though such a state of things is undoubtedly possible, it must be extremely rare. Dr. Balfour has not seen such, his argument being that the cardiac murmurs of chlorosis are formed in a dilated and hypertrophied heart, and that the primary position of the murmur is in by far the larger proportion of cases, if not in all, to be found over the left auricular appendix, where it comes up from behind, just to the left of the pulmonary artery.[2]

[1] Berliner klin. Woch., April, 1868, page 190.

A SUBSTITUTE FOR DIGITALIS. THE CONVALLARIA MAJALIS.

Dr. E. P. Hurd[3] calls attention to this drug, reproducing portions of Germain Sée's article, which appeared in the *Bulletin General de Thèrapeutique* for July 30, 1882. This plant, commonly known as "lily of the valley," has been regarded as a remedy for dropsy by the peasants of Western Europe.

In 1880 two Russian physicians published results of treatment of cardiac dropsy with the convallaria. Professor Sée has recently experimented on animals and man with it. A drop of the extract of the flowers brought in contact with the naked heart of the frog arrests the action of that organ in about two minutes. The result is obtained by injection under the skin. In a dog four drops of the extract injected into a vein caused death in ten minutes. The heart is first slowed and the respirations quickened, then the heart's action becomes irregular and the pulsations faint and very rapid; the blood pressure first augments and then is lowered, the respirations become slower and slower, the heart's action ceases, pressure falling to zero, and the respiratory movements cease in their turn. The excito-motor power of the nerves and nerve-centres is unaffected. The excitability of the pneumogastrics is weakened, not destroyed. No diuretic effects were observed in the dog. Professor Sée administered the drug, usually half a gramme of the extract daily (in some cases increased to a gramme), to twenty cases of cardiac disease. In all but three there was decided improvement, as shown in the increased strength of the heart's action, increase of urine, disappearance of dropsy, or some other marked change properly attributable to the drug. In his conclusions Professor Sée says that convallaria increases the energy of the heart, and has a decided diuretic action ("the most powerful, the most constant, and most useful effect is the abundant diuresis"). It has no deleterious effect on the economy, and no cumulative action.

Dr. Hurd has employed a fluid extract in two cardiac cases, with benefit; in one a copious diuresis set in on the third day of its administration, the quantity of urine passed increasing from eight to sixty ounces.

Dr. A. H. Smith reported at a meeting of the New York Academy of Medicine,[4] a case of typhoid fever, in which, the pulse being imperceptible at the wrist, and the first sound of the heart scarcely audible, the hypodermic injection of the fluid extract of convallaria temporarily restored the radial pulse and distinctness of the heart sounds; also a case (seen in consultation) of peritonitis under the opium treatment, in which the patient suddenly went into a condition of collapse.

[2] For a fuller account of the position and mechanism of the hæmic murmur see London Lancet, September, 1867, page 383, and Balfour on Diseases of the Heart, etc., 2d edit., 1882, pages 84 and 137.

[3] New York Medical Record, September 9, 1882.

[4] New York Medical Record, December 9, 1882.

Caffein and atropia had been given, and the galvanic battery had been applied. The man was apparently dead. The battery was continued. Convallaria was used hypodermically. After the lapse of nearly half an hour the heart's action began to increase in strength and exceedingly shallow, infrequent respiration returned. Ultimately the patient was restored.

Dr. Beverly Robinson also reported at the same meeting that he had used the convallaria in cases of cardiac and renal dropsy with deficient heart power, with favorable results.

Dr. Henry L. Taylor [1] gives a full report of twenty cases treated with the convallaria, daily records of pulse, respiration, and quantity of urine being frequently given. The results seem satisfactory and warrant further trial of the drug as a substitute or alternate for digitalis. The dose used by Dr. Taylor was from ♏ v. t. d. to ♏ xx. q. 4 h. of the fluid extract of the flowers, and in two cases ʒi. t. d. was given with good results, where smaller dosage failed.

Dr. Beverly Robinson [2] reports a case of emphysema and asthma relieved in a remarkable degree by the convallaria.

Dr. Polk, in the same number of the *Record*, reports a case of vagus neurosis in which extremely rapid action of the heart was relieved by the convallaria. The heart was beating at the rate of 240 in the minute. The patient had already taken ten drops of digitalis. Dr. Polk gave him ten minims of the fluid extract of convallaria hypodermically, and one half an hour later repeated the dose. Five or ten minutes after this the pulse dropped to 120. It came down not gradually, but at once. The bad symptoms all disappeared in two hours.

See the JOURNAL of February 22, this year, for some evidence against the value of this drug.

CARDIAC SURGERY.

Our readers have recently had a paper on this subject from the pen of Dr. John B. Roberts,[3] who says that it is more than probable that, in a few years, puncture of the heart wall, with direct abstraction of blood by aspiration, will be recognized as the best treatment in cases of greatly dilated or much distended right heart, with intense pulmonary engorgement, etc.

Dr. C. L. Dana [4] reports two cases in which he aspirated the right ventricle with no effect. Dr. Dana does not consider puncture of the right ventricle a difficult or even very dangerous operation. He would not advise aspiration of the right auricle under any circumstances. Not because it is necessarily dangerous, but physiologists are agreed that the auricle is chiefly a regulator and reservoir, not a propelling muscle. Unloading it could have little effect on the work of the heart. Cardiac aspiration may be indicated in cases of sudden heart paralysis, when the ventricle is presumably over-distended. The needle may possibly relieve over-distention, and by its irritation set the heart to work again. In cases of laboring heart, however, Dr. Dana would vastly prefer venesection, whose potency is unquestionable.

In the same number of the *Record* the editor takes occasion to advise caution in surgical procedures in this region.

[1] New York Medical Record, Jan. 27 and Feb. 3, 1883.
[2] New York Medical Record, Feb. 3, 1883.
[3] See JOURNAL for Jan. 25, 1883.
[4] New York Medical Record, Feb. 3, 1883.

Hospital Practice and Clinical Memoranda.

BOSTON CITY HOSPITAL.

SERVICE OF DR. SUMNER.

REPORTED BY DR. M. D. CLARKE, HOUSE PHYSICIAN.

TWO CASES OF INTESTINAL OBSTRUCTION. ONE FATAL. AUTOPSY.

I. —— ——, a married woman, thirty-seven years old, a native of Ireland, was admitted to the hospital June 15, 1882, on account of gastric disturbance. Six months previously she had begun to lose her appetite, and to feel distress and pain in the epigastric region after meals; and these symptoms gradually increased for five months, when vomiting was added to them. She had vomited every day for the five weeks just preceding entrance, usually two or three hours after taking food. The vomitus had consisted of the ingesta, once of "blackish water," never of blood or "coffee-ground" matter. There was a troublesome pyrosis. She felt hungry at the time of her admission. The pain in the epigastric region was severe enough to keep her awake nights. She had lost a great deal of flesh and strength. There was marked constipation. Beyond a cough of a year's standing, there were no other symptoms. The temperature was normal, the pulse 96.

The next day physical examination discovered nothing but tenderness in the epigastric region. There were paroxysms of pain accompanying visible paroxysmal contractions of the intestines, when it seemed to her that wind was forced up into her mouth. There had been a very slight dejection after an enema of two pints of soap-suds, preceded by half a pint of olive oil. She had retention of urine and required to be catheterized. She was ordered ten grains of bismuth subnitrate three times a day and put upon milk diet.

The next day three quarts of water were slowly injected into the rectum with a Davidson's syringe until some pain was occasioned. This was relieved when the water was discharged, but no fæces were passed. This was repeated the next day, when a slight dejection occurred. There was now discovered, about an inch and a half to the right of the umbilicus, a tumor, the size of a large hen's egg, rather elongated, its long axis parallel to the vertebral column. She looked brighter and felt better as the result of the last enema, had not vomited for forty-eight hours, and craved more food, which was given her in the shape of ice-cream.

From that time until she left the hospital, against advice, nearly a month after entrance, the history was one of progressive failure and emaciation. The constipation continued, but was less marked. The persistent vomiting compelled nourishment by the rectum, which was exchanged now and then for nourishment by the mouth, to be resumed in a few hours. The vomitus was examined a number of times microscopically, but with negative results. The tumor became rather more apparent. Beyond that there was no change in her condition. Nothing was found in the urine.

II. —— ——, a widow, forty-five years old, a native of Scotland, by occupation a cook, was admitted to the hospital May 27, 1882, with the diagnosis of dyspepsia, and discharged well a week later. She gave a history of vomiting for eight months previous, with severe pain during emesis; but there was no vomiting or pain while she was in the hospital.

Three weeks later she was readmitted. She had been well for two weeks, and then vomiting had returned. Two days before entrance she had vomited, she said, half a cupful of blood. Her temperature was normal; pulse 92. Nothing was detected by physical examination beyond tenderness in the epigastrium. She was ordered milk and lime-water, and given twenty grains of bismuth subnitrate three times a day. Constipation was present upon entrance and persisted, and no satisfactory movement of the bowels was obtained until ten days after entrance, after the injection of an ounce of olive oil every hour for six hours, followed by a large enema of soap-suds, containing half an ounce of spirits of turpentine. Two days later her condition was such as to need alcoholic stimulation, and at this time, on account of the persistent vomiting, she began to be fed by nutritive enemas, and a part of the time these were not retained. Hiccough was at this time a prominent symptom. For several days the vomitus was extremely offensive, consisting of stercoraceous matter. The general condition was very poor, and the patient's death was looked for. There was, however, no new physical sign except a little more resistance on the right than on the left side of the abdomen, and a slight œdema of the tissues in that neighborhood. After a few days she rallied, vomiting ceased, and she was again fed by the mouth.

The diagnosis had hitherto been supposed to rest between gastric cancer and ulcer, but a fæcal tumor, perhaps related to obstruction near the ileo-cœcal valve, now seemed possible. Before and after the period of collapse injections of water, as large as could be given without pain to the patient, were forced into the rectum, but only slight dejections followed. The faradic current was also employed, one pole in the rectum and the other moved over the abdomen, but without result. A little later, however, there began to occur moderately-sized, loose dejections, some of them clay-colored, and she was given fifteen grains of calomel, which was followed by a large, loose dejection. The abdomen was now tympanitic throughout, and there was distinct gurgling in the right iliac fossa. For a week or two there were six or eight movements of the bowels daily, the dejections consisting of liquid fæces. The patient sat up and felt much better, was able to eat ordinary diet, and was put upon tonics and malt liquors. The diagnosis of fæcal tumor seemed fairly confirmed. She remained in the hospital a month longer, suffering only from weakness, anorexia, occasional abdominal pain, and vomiting, which were attributed to gastric and intestinal indigestion; and she was sent to St. Luke's Home, in the belief that change of air and scene would be the best restorative.

After a residence of two weeks at St. Luke's, during which time she could retain little or no food and steadily failed, she was readmitted to the hospital, evidently dying. She complained only of abdominal pain, and there was nothing new observed but an aphthous condition of the mouth. She died in four days, diarrhœa being the only marked symptom. The urine was examined each time she was admitted, but with negative results, and nothing of moment was ever found in the vomitus.

At the autopsy, by Dr. Gannett, nine hours after death, there was found some pulmonary emphysema and a moderate atrophy of spleen and kidneys. The mucous membrane of the last thirty centimetres of the ileum, and that of the cæcum and ascending colon was much thickened and reddened, showing many irregular patches of loss of substance with ragged bases. The muscular coat was four times as thick as normal. At the hepatic flexure of the colon the lumen was so narrowed as to admit only a No. 18 French bougie. At this point the mucous membrane had entirely disappeared, the muscular coat was very much thickened, and outside of the latter there was much dense connective tissue. Beyond the constriction the mucous membrane was normal. The neighboring lymph glands were enlarged, dense, grayish-yellow upon section.

III. TYPHOID FEVER. THROMBOSIS. DEATH.

—— ——, a married man, twenty-five years of age, born in Massachusetts, by occupation a teamster, was admitted to the hospital July 26, 1882, complaining only of headache. He asserted that he had been sick but four days, but his dry, cracked, and swollen tongue, marked stupidity, and general condition contradicted him. No farther history was to be obtained. Temperature 102.8° F.; pulse 92. He was given two grains of quinia sulphate three times a day, and ordered to be sponged with cool water every two hours while the temperature remained above 102° F.

The diagnosis of typhoid fever, which the appearance of the patient suggested, was confirmed in a day or two by the appearance of rose spots and the presence of tenderness in the right iliac fossa. Examination of the chest discovered bronchitis. A more active delirium set in. He was given whiskey in moderation.

During the fourth night after admission the signs of a profuse intestinal hæmorrhage were discovered in the bed, but the bleeding had then ceased. The pulse was rapid, small, and fluttering. He was given ten grains of gallic acid by mouth, and five grains of ammonium carbonate and a quarter of a grain of morphia sulphate by hypodermic injection, after which he went to sleep, and there was no farther hæmorrhage. The sponge baths were omitted, and the whiskey was increased. The day but one afterwards he had a chill, and in the afternoon the right arm was found to be powerless, hot, and swollen from the shoulder to the wrist; the hand and fingers were cool. There were purple patches on the fore-arm and upper arm, bright red spots on the former, which was also emphysematous in places. Extension of fore-arm caused pain. The brachial and radial pulse was absent. The temperature was 105° F.; the pulse too rapid to count. Death occurred a few hours later.

IV. PYOPNEUMOTHORAX. DEATH. AUTOPSY.

—— ——, a married man, twenty-four years old, an American, a gilder by trade, was admitted to the hospital August 26, 1882. The family history was good. He had been well until the previous February, when he began to have a cough. The next month he had hæmoptysis, night sweating came on, he lost flesh and strength, and lately had been troubled with dyspnœa and palpitation. His appetite, however, was fair; he had no diarrhœa, and micturition was normal.

Upon examination the next day there was found, when he sat up, diminished respiration over the whole right chest, growing fainter towards the base, and absent behind, from two inches below the angle of the scapula. From the angle downwards the vocal resonance was diminished, growing fainter towards the base; in this region there were metallic tinkling, dull-

ness, and absence of vocal fremitus. When he lay down the whole right chest in front was resonant, the tone being higher in pitch than normal. Hepatic dullness and flatness were nearly absent. Respiration was diminished. In the upper third there were absence of vocal resonance and fremitus, and metallic tinkling. The intercostal spaces on the right side were obliterated. There were marked friction râles over the lower half of the left side in front; dullness, increased vocal resonance, and fine moist râles at the left apex. The area of cardiac dullness began two inches and a half to the left of the median line. The apex beat was felt in the sixth interspace, one inch outside of the linea mammalis. There was marked visible pulsation over the whole cardiac area. A systolic murmur was heard at the apex, and there was a thrill upon palpation.

He was put upon tonics, extract of malt, and whiskey, and for ten days appeared to be slowly improving, being troubled by little but cough and sleeplessness. At the end of that time he slept better, felt much better, and was up and dressed most of the day. The next morning he died suddenly in bed after a coughing fit. Nothing unusual was found in the urine. The temperature, which was normal upon entrance, fluctuated considerably, but rose no higher than 103.2.° The pulse never went above 120.

The autopsy was made about forty-eight hours after death, at the man's residence, by Dr. Clarke. The right pleural cavity, upon puncture, emitted a quantity of somewhat offensive gas. The cavity was filled with thick, laudable pus, and was distended so that it reached beyond the median line and pushed to the left the pericardium and its contents. The right lung, whose pleural surface was covered with a fresh fibrinous false membrane, was dense, retracted, and pressed close against the vertebral column. Its cut surface was covered with tubercles. The apex of the left lung was dense, and its cut surface also covered with tubercles. There was incompetency of the mitral valve.

V. TUBERCULAR PERITONITIS AND MENINGITIS. DEATH. AUTOPSY.

(*Dr. A. L. Mason on duty.*)

—— ——, a single man, twenty-four years old, a native of England, by occupation a book-keeper, was brought to the hospital in a comatose state September 21, 1882. It was learned from his friends that his parents died of consumption, and that he had not been considered as strong as his brothers and sisters. He had been in this country a year, and had not been well for some time, though he had kept at work as usual. Two weeks before entrance he had begun to complain of severe headache, general pain, and anorexia. He spent most of the time lying, dressed, upon a sofa, and did not take to his bed until the day before admission. He was at that time delirious.

When seen his temperature was 100.5° F.; pulse 75, regular, and of fair strength. Attempts to rouse him were vain, and he could not be made to swallow. He had to be tied to keep him in bed. The pupils were equal, slightly contracted, responsive to light. The other reflexes were normal. There was no paralysis. The tongue was moist, but he could not be got to protrude it. Physical examination of the chest gave a negative result. There was apparent tenderness in the right iliac fossa, but no rose spots or splenic tumor. There was retention of urine, for which catheterization was ordered. Slight albuminuria was present, but the microscope found nothing unusual in the sediment. An ice-cap was placed on his head, and he was given nutritive enemata.

The next day some convulsive twitchings were noticed. A stimulating enema was given without result. In the afternoon the left pupil was found dilated and much larger than the right, and the head was turned to the left. Ten grains of calomel were laid upon the tongue, and this was followed by a free movement of the bowels.

During the night he swallowed nearly a quart of milk, and the next morning appeared much better, though he would not talk or put out his tongue. The pupils were normal, but there was ptosis of the left eyelid. The nutritive enemata were discontinued.

The next day he was able to talk and answer questions. There was alternating strabismus. The abdomen was distended and painful. The urine was passed involuntarily. The nurse had noticed some tenderness at the back of the neck. During the next night he was so restless as to require a subcutaneous injection of morphia. The next morning the abdominal distention and tympanites had increased. Carphologia was present. He was freely stimulated, but during the forenoon became cyanosed, moist râles were heard throughout his chest, and death occurred in a few hours. The temperature never rose above 102° F., nor the pulse above 100.

The autopsy, by Drs. Johnson and Clarke, four hours after death, found the peritoneal surface of the diaphragm, that of the right abdominal wall, and part of that of the small intestine covered with tubercles. Tubercles were found in the omentum also. The lower part of the ileum was congested, and its external surface covered with a false membrane. There was a large amount of reddish fluid at the base of the brain and in the left lateral ventricle. There were two small, opaque, thickened patches in the pia mater at the base. The fissures of Sylvius on both sides were partially obliterated by old adhesions. The walls of the left lateral ventricle were roughened, and in one part covered with tubercles.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

JANUARY 10, 1883. Meeting called to order at 8.15. DR. GEORGE B. SHATTUCK in the chair.

DR. E. F. CUMMINGS read a paper[1] on

A CASE OF CONGENITAL MALFORMATION OF THE GENITAL ORGANS.

DR. GANNETT mentioned some of the anatomical peculiarities grouped under the term of hermaphrodism, and said further that he thought the present case did not come under that head. The internal generative organs were evidently those of a female, and it seemed to him that the appearances presented by the external genitals might readily be explained on the supposition of an atresia of the vagina and a hyper-

[1] Vide page 195, this number of the JOURNAL.

trophy of the clitoris. Hence he would consider the individual to be a female.

Dr. David Hunt exhibited a sketch of the development of the generative organs in each sex at an early embryonic date, and observed that at such a period it was absolutely impossible to determine the sex, or to detect any difference between the sexes. (Kölliker, His, and Waldeyer.)

Dr. Blodgett said that the present specimen recalled a very interesting case he saw in Berlin, which was exhibited and described by Professor Virchow in 1872. The individual was about fifty years old, tall in stature, strongly built, having broad, massive shoulders, and probably weighed about one hundred and ninety pounds. The general health was good, and no physical distress or discomfort was known to be occasioned by the malformation. The right side of the face was larger than the left, the skin brawny and dense; the lower part of the face produced a coarse, stiff beard, and was regularly shaven. The right eye was farther removed from the median line than the left, the palpebral opening larger than that of the opposite organ, and the globe of the eye apparently of a greater diameter than that of the left side. The left side of the face was comparatively soft and smooth, the growth of beard was scarcely noticeable, the skin was not brawny nor thickened, and had a soft, feminine feeling. The left eye was apparently smaller than the right, the palpebral opening absolutely smaller, the distance of the organ from the median line not so great as that of the right. The breasts corresponded in every particular with those of a woman, and were very full, firm, and elastic, and covered with a delicate skin. The hips were no so broad as in a woman, but conformed more nearly with those of a man. The arrangement of the sexual apparatus was very interesting. In the normal position of the penis was found an organ about three inches in length, covered by a prepuce, and curved strongly downward. Upon elevating this organ it was observed that it was hypospadiac, and presented only a longitudinal groove upon the under surface. At a point immediately beneath this groove, at its proximal extremity, was observed the opening of the urinary meatus. Below this was located what seemed to be a scrotum, but examination revealed the fact that the organs of both sexes were present, the part upon the right side being a complete unilateral scrotal sac, containing a fully developed testicle with spermatic cord, while the portion upon the left side was a perfect external labium. The organs lay in juxtaposition, but were not united.

A catheter introduced into the urinary meatus, and passed gently along the floor of that canal, readily and easily entered the bladder, and urine flowed through it. Upon being withdrawn a short distance, and receiving an upward direction, the catheter entered another canal with more resistant walls and firmer structure, into which the instrument would pass but a short distance. The latter canal was considered to be the entrance to a uterus, communicating with the urethra by an opening anterior to the sphincter of the bladder.

In early life this individual had been married to a woman, and for four years occupied the relation of husband. No offspring was produced by this union, and at the end of this period a mutual separation took place. At one time the individual was in a hospital,[1] and while there was the subject of the closest investigation. During this period a natural menstruation occurred, which afterward reappeared at regular intervals while the patient was under observation. The fluid was examined and found to correspond in every known characteristic to the ordinary menstrual flow. It was also ascertained that seminal fluid was produced in this individual, which was ejaculated during orgasm, and which contained normal spermatozoa in a state of active motion. Thus it seems from repeated careful observation, aided by chemical and microscopical analysis, that the internal organs and functions of both the male and female organism are represented in the body of this strange individual.

[1] In Würtzburg, if I am not mistaken.

Dr. Cutler said the case spoken of by Dr. Blodgett he remembered perfectly as having been presented to the students at Berlin by Professor Virchow in the winter of 1872, though he had forgotten the details. Professor Virchow considered it, as Dr. Blodgett said, a case of hermaphrodism, and said substantially that this was the only case to his knowledge hitherto where the characteristics of true hermaphrodism had been traced so far as to require only the anatomical proof of the correctness of the conclusions.

The *Berliner klinische Wochenschrift* for 1872, No. 49, contains the account of the presentation of the case before the Berlin Medical Society, with a full description of the appearances, and the same case is translated and reported in full by Dr. Mundé in the *American Journal of Obstetrics*, vol. viii., p. 615, 1875.

Dr. Hunt thought that embryology favored the view that perfect hermaphrodism might occur. It is well known that for the first two months of embryonic life there is no distinction of sex; Müller's ducts and the Wolffian bodies and ducts exist in embryos of both sexes; when the sexual glands appear they cannot be distinguished as testicle and ovary; we have only to apply our knowledge of the pathology of the embryo to see that this condition of things makes perfect hermaphrodism a possibility. The process of development of the generative and urinary organs is well illustrated by the plate on page 340 of Henle's *Eingeweidelehre* and but slight additions have been made to the facts stated by Henle in describing the process.

Kölliker, after describing the development of the generative organs, in the last edition of his *Entwickelungsgeschichte*, says, "Hermaphroditic formations are striking in this connection, and particularly Scanzoni's case, where with well-formed male sexual organs there is a vagina opening into the pars prostatica urethræ, and a well-formed uterus and oviducts. It cannot surprise us to learn that there are cases, though seldom, where one sexual system is developed on one side and one on the other."

The case presented this evening appears to be one of deformity of the external genitals in a female.

Dr. Deblois asked if any microscopic examination of the organs found in the labia was made.

Dr. Cummings replied that Dr. Dwight examined them and found them to be ovaries.

Dr. G. B. Shattuck stated that whatever the external appearances of the individual case might be the determination of the sexual condition depended upon the presence of an ovary or testes. Cases possessing an ovary and a testis are exceedingly rare.

Dr. Draper said that the distinction of sex is based upon the functions possessed by the individual. He rather discredited the statements made by Dr. Blodgett, as to the existence of both generative functions in

one person; such a case he had never seen reported in medical literature. He thought that the only way of determining the real hermaphroditic character of an individual was the crucial one, in which the individual should beget offspring in a female, and should also bear offspring from impregnation by a male, thus demonstrating the existence of the double functions of the male and female sexual organism in the same individual.

Dr. Blodgett remarked that such a view of the subject appeared very strange and inconsistent. In the case he had described the presence of menstruation had been established by the careful investigations of trustworthy observers, who found its recurrent flow to correspond in every known characteristic to that of the ordinary fluid naturally eliminated at this time in all healthy, non-pregnant women. Thus far the presence of feminine organs and functions was established. The existence of seminal fluid had been proved, which was ejaculated during orgasm, and which contained active and apparently normal spermatozoa. The physical and anatomical conditions present in the case constitute an insurmountable hindrance to the occurrence of conception in the body of this particular individual, and probably also to the successful accomplishment of the sexual act with a female; but physically, chemically, and microscopically, the evidences of both male and female generative functions are indisputable, and there would seem to be no good reason to doubt that with more favorable structural and anatomical relations, both generative functions might be successfully performed by this or any similar individual.

Dr. Hunt stated that Kölliker had recognized the existence of hermaphrodism or *Zwitterbildungen* in the human subject, and that Scanzoni had seen and described the condition mentioned by Dr. Blodgett. The study of these curious freaks of nature was impeded because of defective knowledge of the primary anatomical formations, due to deficient teaching and lack of study of the embryonic development. The double organization of a hermaphrodite has its origin in some cause acting upon the transitional embryonic structures during the first three months of gestation, and it is well nigh useless to attempt to study the causes of such a malformation in an organism in which the organs have already reached their ultimate development, and the early relations and structures are entirely obliterated.

Dr. Shattuck asked Dr. Draper if any case had been reported in which menstruation existed, but in which there was no ovary.

Dr. Draper did not know. He mentioned the case of Levi Suydam, of Connecticut, who was considered to be a man, and conducted himself as such in every way, taking an active part in the elections and voting. On the occasion of an exceedingly close electoral contest, however, his vote was challenged on the question of sex, and the subject being referred to a board of physicians, they decided from the presence of a monthly menstrual epoch, that the individual was a female.

Dr. A. L. Mason reported a

CASE OF POISONING BY ILLUMINATING GAS,[1]

and in concluding referred to a similar case reported by Dr. Draper in the last volume of City Hospital Reports.

Dr. Draper remarked that Dr. Mason's case forms an interesting example of this accident. The occurrence of gas poisoning is usually the result of misadventure from leaving a gas-cock open by accident, or from blowing out the flame without turning the cock. Suicide by this means is rare, but Dr. Draper has had occasion to investigate two such cases during the past year. The first was that of a young man who retired to his room, and after twelve hours was found dead in bed. The chamber was tightly closed, the bed was drawn into the middle of the room beneath the chandelier, and a rubber tube was found attached to the tip of one of the fixtures, which conducted the gas to the bed near the face of the victim.

The second case was that of an inventor, who also attached a rubber tube to the gas fixture, the other end of which was placed near his mouth, and held in this situation by a towel bound tightly about the head.

Dr. Draper knew of no instances of homicide by this agent, although considering the facility with which it might be used for homicidal purposes, its deadly qualities when inhaled, and the rapidity of its action, it seemed rather remarkable that it had not figured more extensively in criminal records.

As to the cause of death, Dr. Draper agreed with Dr. Mason that carbonic oxide was probably the chief toxic agent; but it is quite possible that the hydrocarbons present in coal gas exercise a modifying influence both upon the symptoms and upon the post-mortem appearances. Some cases, of which Dr. Draper gave an illustration from his own observations, presented the characteristically altered condition of the blood, the bright color and the extreme fluidity, which indicate the profound effect produced by carbonic oxide upon the hæmatin and blood serum; while in other cases of death by coal gas these distinguishing features were absent, and the blood was dark and contained clots. In the case reported, sufficient time had probably passed between the exposure and the death to permit the blood to become restored in part to its normal state.

The subject of coal-gas poisoning has a sanitary as well as a medico-legal side. Not a little of the ill health of cities might be traced to the usual methods of illumination in houses; not only to the effects upon the atmosphere of the combustion of gas, but to the slow escape of the gas into the air of houses through leaking joints in the pipes, and through defective fixtures, to say nothing of the danger to life by the discharge of gas in detonating proportions.

The light of the future, the electric light, which is not dependent on pipes for its distribution, which does not heat the air intolerably, nor use its oxygen, nor poison it with carbonic oxide, is hygienically a welcome innovation.

As an illustration of the effects of acute gas poisoning Dr. Draper recalled a case of incendiary fire, in which all the tips of the gas fixtures had been removed, and the gas everywhere turned on. In a remote part of the building the dead body of a man was found in which the blood was entirely fluid, and of a beautiful carmine color, which properties it preserved unchanged for some days. The blood also responded to chemical tests for carbonic oxide.

Dr. Mason stated that the color of the blood in the case he reported was normal, and not that usually observed in poisoning from carbonic oxide. In the case alluded to in the City Hospital Reports the blood was nearly black, and contained some ill-favored clots.

In reply to a question from Dr. Shattuck Dr. Draper stated that no changes were observed in the kidneys in these cases.

[1] See page 196 of this number of the Journal.

DR. SHATTUCK remarked that this accident was rare in Boston, the one reported by Dr. Mason be being the first in a long time. In New York, on the contrary, poisoning by gas is of comparatively frequent occurrence, cases of this kind being frequently received at the Chambers Street Hospital.

DR. DRAPER reported a case of

CROUPOUS INFLAMMATION OF THE PHARYNX, LARYNX, AND TRACHEA, WITH OCCLUSION OF THE LARGER BRONCHI.

G. B. P., twenty-two years old, married, and a brakeman, entered Boston City Hospital, January 8, 1883. There was a history of cough of four months' duration, but no other pulmonary symptom. Present sickness began five days before entrance with nausea, vomiting, epistaxis, and headache; sore throat; pain in deglutition. Cough abundant, with whitish expectoration. Slight chilliness and anorexia. Some difficulty in breathing for three days, but wheezing respiration and aphonia of two days' duration.

At time of entrance had a croupy cough and difficult breathing. Could speak only in whisper. Pulse was 120; respirations 28; temperature 103° F. Throat examined by Dr. Prince, who found larynx covered with a grayish deposit which involved the true and false cords. Fauces showed redness only. Steam from an atomizer was inhaled every two hours, and a poultice was applied every four hours to the neck.

He was very restless during the night, and did not sleep. He had six dejections that were loose, but without membrane or blood.

In the morning he had a copper and opium pill, and the spray of salicylate of soda, ten grains to the ounce. Sherry, two ounces every six hours. He coughed up several pieces of membrane, some as large as a silver dollar.

In afternoon respirations 28; pulse 148; temperature 102° F. Chest showed good resonance in front, with some sonorous and sibilant râles; some diminished resonance over left back and feeble respiration. Some laryngeal stridor. Nails and face slightly blue.

Tracheotomy was performed by Dr. Thorndike, and patient lived five hours after operation. During this time had he stimulants freely and steam from atomizer. Breathing was fairly quiet, but pulse rapid and weak. Died very quietly without signs of suffocation.

DR. GANNETT, who had made the autopsy in the case, demonstrated the specimen.

The tonsils were nearly doubled in size, reddened, their crypts filled with partially adherent plugs of fibrine. On the posterior wall of the pharynx were numerous similar patches of fibrine; the mucous membrane beneath being reddened and injected.

A continuous fibrinous false membrane covered the epiglottis, larynx, mucous membrane of trachea and bronchi down to the smallest divisions which could be followed out with fine scissors.

The glottis opening was only large enough to admit a crow-quill.

In the trachea and bronchi down to the fourth division the fibrinous false membrane formed hollow cylinders, below this point solid plugs.

The lungs were œdematous, but contained no excess of blood.

The spleen presented the appearances characteristic of acute hyperplasia of that organ.

There was not sufficient evidence of cloudy swelling of the other organs.

Dr. Gannett further expressed the opinion that as far as the appearances of the air passages alone were concerned one should designate the affection anatomically as a croupous inflammation, but considering the evidences of a septic condition elsewhere in the body, the rapidly fatal course, together with the fact that anatomical evidence of death by suffocation was wanting, would lead one to think of diphtheria, and certainly as far as the Board of Health regulations were concerned it would be better to take the precautions observed in cases of diphtheria.

DR. MASON asked whether benefit was derived from tracheotomy in adults with diphtheria.

DR. DRAPER replied that in the majority of cases no benefit was obtained from this operation.

DR. GANNETT stated that in the light thrown upon the present case by the autopsy it was evident that no medical or surgical measures could have been of the slightest possible service.

In reply to a question, Dr. Gannett stated that the membrane probably developed simultaneously in the throat and air-passages, though this could not be positively determined.

OVARIAN CYSTS.

DR. BLODGETT showed two ovarian cysts which had recently been removed by Dr. John Homans, who had kindly permitted them to be exhibited to the Section. The first was a large sac free from external adhesions, except at the point of attachment by the pedicle. The Fallopian tube was found, and traced fifteen centimetres to its extremity, where were apparently normal fimbriæ. No other remarkable appearances were observed upon the exterior of the sac. The interior of the cyst, however, was seen to contain the ragged remains of former septa which had divided the present large sac into a number of smaller ones, but owing to the attenuation of the walls between these primary cysts, or atrophy, or some other cause, these divisions had been obliterated, thus forming one large cavity. The wall of this cyst was covered on its internal surface by numerous small cysts with thin walls containing a clear limpid fluid.

Dr. Blodgett remarked that the present specimen probably originated from a cystoid process affecting the ovarian or Graafian follicles, by which some or all these structures became the seat of a more or less extensive accumulation of fluid. Coincident with this was a hyperplasia of the connective tissue or stroma of the ovary, the attenuated remains of which formed the boundaries between the separate cysts of which the growth was formerly composed. Many of these primary cyst walls had ruptured, thus forming one large sac. Around the periphery attached to the original but hypertrophied capsule of the ovary were numerous cysts which still remained intact as separate smaller sacs. The appearances of glandular proliferation in the cyst wall described by various writers were not to be seen in this case.

The second cyst presented an entirely different form of ovarian disease. Externally the sac offered no striking appearances. The pedicle was of the average size, and the Fallopian tube could be followed twelve centimetres to its fimbriated extremity. There were no indications of adhesions. The greater portion of the cyst content was fluid, but at the lower part of the sac was felt a firm, hard, nodulated mass of irregular outline and the size of an infant's head. In a re-

mote part of the cyst could be felt another nodule of a similar character, the size of a horse-chestnut. Upon opening the sac the growth was found to consist of a network of pinkish tissue of greatly attenuated character, inclosing multitudes of hard grayish or pearl-colored nodules, which were somewhat raised above the general level of the surrounding tissue, and much resembled the appearance of secondary carcinoma in the liver. In some parts of the growth the nutrition of the mass had been suspended, and necrosis had occurred, with the disintegration of the tissues into a grayish-yellow smeary substance. The nodules upon the cyst wall referred to above were seen to be similar to the mass of the larger growth, and were evidently derived from it by local infection, or transplantation, or metastasis. Microscopic examination showed the pink tissue to be connective tissue, with vascular channels, etc., while the gray nodules were composed of enormous proliferations of epithelium, generally of the squamous variety. In many places the epithelial cells were detached and evidently necrotic. The cellular structure of the secondary growth on the cyst wall was similar to that just described.

The diagnosis was papillary carcinoma of the ovary associated with cystic degeneration, and local infection of the cyst wall. There was no appearance of the cancerous affection having penetrated the cyst wall so as to have extended to other organs, and the interesting question presents itself whether the patient may be supposed to be protected against further danger from carcinoma by the entire removal of the disease while it was still inclosed within the distended capsule of the ovary.

Dr. Gannett said that he must differ from Dr. Blodgett in his supposition that the numerous cysts present represented dilated follicles of the ovary, such tumors not having been observed of large size. He thought they represented an actual new-growth, and were to be classed with the *cystomata* of Waldeyer. The fluid contents, he thought, should not be considered as serum, but rather as the paralbuminous colloid material, investigated many years ago by Eichwald, and which represents the product of the metamorphosis of the cells lining the new-formed cysts.

In regard to the large mass in the wall of the second cyst, Dr. Gannett, while allowing that cancers occasionally developed in the walls of ovarian cysts, yet thought in the present case that it represented not a cancer but rather the papillary form of cystoma.

Dr. Gannett gave also a short sketch of the development of the ovarian cystomata as first shown by Waldeyer and generally accepted by later writers.

Adjourned at 10.15 o'clock.

NEW YORK ACADEMY OF MEDICINE.

DIET IN THE TREATMENT OF THE GOUTY DYSCRASIA.

At a meeting of the Academy, held February 15th, Dr. William H. Draper read a paper with the above title. He commenced by saying that the subject of food and the problems which arose from its relations to normal and impaired nutrition, and its proper use in the treatment and prevention of disease, were daily attracting more and more attention, and that the practitioner of medicine was now expected to prescribe the diet as well as the drugs for his patients. The recognition of the truth of the old saying, "there's death in the pot," had induced people to inquire of their medical advisers what kind of food and drink they ought to partake of, and judicious feeding constituted an important element in the treatment of every case of disease.

Dr. Draper then made a preliminary statement in regard to some of the theories advanced concerning the nature of gout, which, in its regular, acute form, he said, was a specific arthritis, with an accumulation of uric acid in the blood, and a deposition of urate of soda in the affected tissues. There were, however, a great variety of symptoms which were properly described as gouty, and yet which could not all be satisfactorily explained by any theory yet proposed. Since Garrod's investigations the humoral pathology had been very widely accepted. Having spoken at some length of the chemical theory of digestion, he alluded to the not infrequent concurrence of lithæmia and glycosuria. In both conditions the liver was, no doubt, at fault. Heredity and the mysterious influence of the nervous system, he went on to say, were very important factors in gout, and while it was undoubtedly a disease in which suboxidation occurred, it was impossible to say whether the suboxidation was the essential element or merely an incidental epi-phenomenon. It was a well-known fact that uric acid salts accumulated in the blood in other diseases, and yet did not produce the symptoms of gout. The humoral doctrine was, therefore, still involved in some obscurity.

He next spoke of the neuro-pathology of gout as taught by Cullen, and in connection with it pointed out the frequency with which purely nervous influences determined an attack of gout, and the influence of certain diseases of the nervous system, such as cerebro-spinal meningitis and tabes dorsalis. Such facts, however, did not necessarily militate against the generally accepted humoral pathology.

The treatment of gout, whether based on the chemical theory or on the hypothesis that the affection was a trophe-neurosis, embraced dietetic, hygienic, and medicinal means, and the present paper was devoted to a consideration of the first of these. The successful combating of this dyscrasia involved in every instance a consideration of the quality and quantity of food required. The approximate estimate was necessarily a variable one in different cases, and the age and general condition of the patient, as well as the amount and nature of the work he had to do, were constantly to be borne in mind. In adult life food was required for the repair of waste and for the protection of the individual against heat and cold. It had been proved that all force resided in the food taken, and that there could be no motion which did not result from a preceding one. Daily nutrition had a direct bearing upon the gouty diathesis, and if an excess of food were taken it was impossible that it should all be oxidized. The relations of the quality of food were perhaps less essential, but still of the greatest importance. The amount of the carbonaceous elements required would depend on the physical exertion to be made and the degree of cold to which the individual was to be exposed. It was for this reason that such a large amount of fats was consumed by laborers and by those living in the Arctic regions. A nitrogenous diet, on the other hand, was needed by those who were not much exposed to cold, and who had mental rather than muscular work to do. From time immemorial a special regimen had been

considered necessary for those affected with the gouty diathesis, and it had always been the counsel of the authorities on this subject that gouty patients should partake very sparingly of albuminous foods, and live principally upon farinaceous articles of diet. Dr. Draper's observations, however, went to show that gouty subjects were unable to digest the carbo-hydrates. This kind of food produced acid and flatulent dyspepsia and the very symptoms which usually preceded an explosion of acute gout. In the children of gouty parents over-indulgence in amylaceous and saccharine foods was almost sure to be followed by evil consequences, and great caution in the use of these was one of the surest means of diminishing the liability to acute attacks in those already subject to the disease. The diet, then, in the gouty dyscrasia was to be in the main similar to that required in glycosuria, although it was not necessary that the abstinence from carbo-hydrates should be so strict as that demanded in diabetes. The patient should, therefore, refrain as much as possible from saccharine, starchy, and fatty foods, and especially from all fermented alcoholic beverages. Distilled liquors did not have the same effect, as seemed to be shown by the fact that gout was much more prevalent in England, where beer and stout were universally partaken of, than in Scotland, where whiskey was the drink most indulged in. It was also said that gout was rare in Russia and in Poland, where spirits are principally used. In regard to the effect of wines there was, of course, a difference according to the kind used. Sherry, port, and madeira were the most injurious, but the heavier clarets and burgundies were also to be carefully avoided. The effect of cider was well recognized in the production of gout, and in New England, where it was a common beverage, it often lead to the development of the irregular forms of the disease.

All drinks containing any unfermented sugar were to be excluded, and if the patient insisted on taking wine, he would have to confine himself to the dryest of the dry champagnes, hock, or light claret. But even these could not always be trusted, and the safest alcoholic beverage that could be taken was a very diluted spirit. Indulgence in saccharine food ranked next to that in wine and beer in danger, and it was an important point to observe that this excluded the use of many fruits, such as strawberries, apples, and oranges. Next in importance in this connection came amylaceous articles of diet; but it was not necessary that these should be entirely abstained from, but only that they should be eaten in moderation. They did most mischief in those inclined to obesity and who led sedentary lives. All kinds of salads, tomatoes, and the various succulent vegetables free of starch, could be taken with impunity. In obstinate cases the milk diet was of the greatest utility. The digestion of the carbo-hydrates was always more or less impaired in gouty individuals; but if an active outdoor life were engaged in, it was not necessary to look after the diet so carefully. The gouty man who remained in-doors much of his time, however, would do well not to live upon potatoes and puddings.

DR. HADDEN remarked that the dietetic treatment advocated by Dr. Draper was essentially the same which he had himself adopted for the past five years, and with very gratifying success. The theoretical problems in connection with gout still remained unsettled, and he was more particularly interested in the clinical aspect of the matter. His experience had been to the effect that nitrogenous food, fully allowed, counteracted the gouty dyscrasia in a very remarkable manner, and he had already published a number of cases which seemed to establish this point beyond question. These were principally subacute and chronic cases, and the meat diet, used both day and night, had in every instance at once diminished the quantity of urates.

It was his practice to cut off entirely, as far as possible, all starchy and saccharine foods, just as he did in cases of diabetes mellitus. Not infrequently his old patients wrote him that if they transgressed the rules which he had laid down for them the gouty trouble was almost sure to come back again. All the medicinal means which he had employed had been simply for the relief of some temporary condition complicating the case. Thus, salicylate of soda had sometimes been given for the purpose of counteracting fermentation of food in the stomach. In many cases where gases in the intestines had previously been very troublesome, the patients had no further difficulty of this kind after commencing the nitrogenous diet. As a confirmation of the correctness of the views now advocated he remarked that it had been observed that parrots, pigeons, and other birds fed upon starchy food not infrequently had chalk-stones about their feet, while in carnivorous birds, such as eagles and vultures, this condition was never found. The same difference had also been observed in herbivorous and carnivorous quadrupeds.

DR. MARY PUTNAM JACOBI said that Dr. Pepper had recently called attention to the fact that certain individuals in whom there had never been any deposit of lithates, and who had always previously enjoyed good health, were suddenly seized at the age of thirty, thirty-five, or forty, with hypochondriasis, and that they were entirely cured by a resort to a milk diet alone. This seemed to be unquestionably one of the protean forms in which the gouty dyscrasia manifested itself. That the meat diet diminished the amount of uric acid she had herself incontestibly proven in a great many cases by a quantitative analysis. She was accustomed to restrict her patients to an absolute meat diet and gluten bread, and this plan had always been followed by a marked decrease in the symptoms present. Dr. Draper had not said anything about the difficulty of keeping patients upon such a restricted diet as this, and she thought it was a point of some importance. One patient of hers suffering from obesity and debility became exceedingly prostrated after using it for ten days. She then, however, gave her nux vomica and nitro-muriatic acid, under the idea that the liver was at fault, and after that she had no further trouble. In the course of a year she had lost forty pounds and had regained her strength.

DR. JANEWAY remarked that one fact struck him as rather peculiar, namely, that milk, which while highly nitrogenous, yet contained a large amount of sugar, should be of so much service. It seemed to him that in the treatment the main thing was to avoid acid dyspepsia. In regard to the pathology of gout, if it was taken to be of neurotic origin, the characteristic gouty deposits ought to be found more frequently, he thought, than they were in nervous patients. Again, it was not uncommon to see gout determined by an injury or by some nervous attack; but the real reason why the gout occurred, as it seemed to him, was because some dys-

peptic trouble was thus excited. On the whole, the humoral pathology seemed to be the more satisfactory.

In reply to Dr. Putnam Jacobi, DR. DRAPER stated that while difficulties sometimes occurred in getting patients to adhere to the proper kind of food, he had never found it necessary to restrict the subjects of gout to so exclusively a nitrogenous diet as she had done. In a few cases with obstinate lithæmia he prescribed a milk diet, but as a rule it was only necessary to restrict the amount of sugar taken, and see that the patient ate only a moderate quantity of wheaten bread and other starchy foods. Patients were apt to be rebellious, and it was sometimes necessary to allow them certain indulgences. He generally advised plenty of green, succulent vegetables, as these did not seem to interfere with the success of the treatment, and they added greatly to the comfort of the patient. As to the sugar in milk, this was certainly one objection to it, but he was of the opinion that whenever a milk diet was prescribed the patient should at the same time be directed to take more or less alkali. When soda, for instance, was used with the milk he had found that it was almost invariably well borne.

DR. FLINT thought that in order to settle the question of what treatment was appropriate in the gouty dyscrasia it was best to depend upon clinical observation rather than any merely theoretical views. What the profession needed on this subject was a sufficient collection of facts in regard to the results of different kinds of diet. As to dyscrasia, there was, perhaps, no disease in which a dyscrasia played so important a part as in gout.

DR. DRAPER said he quite agreed with Dr. Flint as to the desirability of gathering a mass of clinical facts on the subject. In regard to the pathology of the affection, his aim had been to show clearly that the diet which had been most successful could not be explained or justified by any theory that had yet been suggested, and he did not believe that any one could offer a satisfactory explanation why an animal diet was best in the majority of cases. He could only say that his experience had demonstrated to him that nitrogenous food offered the patient the best protection against all the various manifestations of the disease.

DR. HADDEN said that in his experience a milk diet was not well borne in subacute and chronic gout, and he believed that this was on account of the sugar which the milk contained. In some cases he used instead of gluten bread wheat bread which had been very thoroughly toasted.

Remarks were also made by DRS. KINNICUTT, BARKER, and PIFFARD.

— A contemporary suggests that with the progress of electrical science a new weapon will be put into the hands of assassins and murderers, and that death can be caused so as to leave no pathological or chemical traces sufficient for detecting its ætiology. Certainly it would not be strange if some ingenious and educated criminal should make use of such an instrument, especially now that the "humanitarians" are advocating its employment for the destruction of superannuated and superfluous animals. The suggestion of electricity as a substitute for hanging as a means of execution of criminals is also being renewed.

Recent Literature.

Report of the Pennsylvania Hospital for the Insane for the Year 1882. By THOMAS S. KIRKBRIDE, M. D., Physician-in-Chief and Superintendent.

This report, which is the forty-second of the institution, and, what is more remarkable, the forty-second of Dr. Kirkbride's, is as usual of much interest. There is the same spirit of contentment, good nature, and confidence in the future which has always characterized the Pennsylvania Hospital Reports, and made them very pleasant reading.

At the end of the last year there were 398 patients in the institution, since which time, to January 1, 1883, 193 have been admitted, and 183 have been discharged, leaving 408 as the present number. Sixty-six recovered, and twenty-three died. Four of the deaths were from general paralysis.

The number of patients received into the hospital since its opening has been 8673.

This is the fourteenth year during which there has been some sort of amusement furnished the patients every evening during nine months of the year. Modeling in clay and painting in oil are branches of occupation recently and successfully introduced. We are especially glad to see that the cultivation of flowers by some of the ladies, in gardens under their immediate control, has been practically tried and been found satisfactory. It is an undoubted fact that manual labor out-of-doors, in some form, is the best occupation for the insane, and we hope the day is not far distant when we shall see large numbers of the gentlemen and ladies in private asylums hard at work in the flower and vegetable garden, priding themselves on the small number of weeds their gardens contain.

Taking the insane hospitals at Harrisburg, Dixmont, Danville, Warren, and Norristown, there are accommodations, or soon will be, for over 3,000 insane patients without crowding, and private asylums will accommodate about 700 more. These figures show creditable progress, Dr. Kirkbride says; if there are, however, over 8000 insane persons in the State of Pennsylvania, it will be some years before all the insane are provided for.

Laws should be made forbidding the admission of the insane into almshouses, or their retention therein, and for the exclusion of insane criminals from ordinary insane hospitals.

The early treatment of insanity is of the utmost importance; and the number of lives sacrificed by allowing insane persons to be at liberty is very large. As many as twenty-seven years ago Dr. Kirkbride found that the number of persons whose lives were sacrificed or jeopardized by the insane who were allowed to be at large in the United States was equal to those lost by all railroad accidents. The number may not be so large now.

Mental diseases should be made a study of in medical schools, and some knowledge of the functions of the brain, and of the courses of life likely to lead to their disturbance, should be imparted to the pupils in ordinary schools.

Insane hospitals, and treatment in them, should not be such bugbears as they have been, and a closer understanding of them will probably remove some of the mistaken ideas now held concerning them.

The effect of hereditary influence as a cause of in-

sanity has been often greatly exaggerated. Out of 5381 cases of primary attacks of insanity, for instance, hereditary influence could be traced in only 434. This gives us less than one in twelve, and is, we are certain, below the actual relative proportion.

When we take the extreme difficulty of getting at the causes of insanity, and especially the still greater difficulty of obtaining even the most meagre family history of insanity, we see how very liable statistical tables concerning hereditary influence will be to err. Then, too, human nature has been, and is now, for that matter, so weak, that many persons are positively ashamed to "own up" to insanity in their sisters, their cousins, or their aunts, or any one else in the family. It is also a fact, that in the immense number of the pauper insane there are but few instances where the friends are sufficiently intelligent to give any information at all about heredity. It is a great and misty conundrum, which is given up or evaded by a negative reply. W. C.

The Management of Chronic Inebriates and Insane Drunkards. By ALBERT N. BLODGETT, M. D. Boston: 1882. Read at the annual meeting of the American Social Science Association, September 6, 1882.

Dr. Blodgett discusses in an able and interesting manner a subject of the greatest importance. In this country we hear a good deal about drunkenness, but chiefly from temperance lecturers or would-be reformers, who usually overstep the bounds of truth and look at the question almost entirely from the moral or sentimental side. This point of view is an important one, but it offers little that is practical or scientific in the direction of remedial agencies. When, therefore, a scientific paper, like that of Dr. Blodgett, is presented to us, we read it with great pleasure.

Dr. Blodgett thinks that there has been a great increase in abnormal development of the nervous system among American and other people during recent years. "There is an increased excitability, an abnormal activity of all the cerebral and nervous functions." The causes of the increased nervous tension are numerous. It is impossible to enumerate them all, but among them may be mentioned, the modern science of politics, of the kind in which personal ambition usurps principle; the abolition of principle; the mania for speculation; the insatiable desire for wealth; the rapid dissemination of intelligence. Another potent factor is the changes in the private and domestic life of the people. Large cities are over-crowded, and in them much of the quiet restraint and peaceful influence of home life is lost. The young of both sexes are too soon thrown into the vortex of excitement, and often have insufficient self-control to withstand the temptations by which they are surrounded.

Human nature cannot long bear the strain thus put upon it. There is a limit to human energy, and it is necessary either to relax the strain or resort to the use of some form of artificial stimulus. Unfortunately the latter course is the one often followed. By frequent indulgence the habit thus formed of using stimulants becomes fixed, and finally the person who first began the habit for the purpose of temporarily replacing lost vitality by alcoholic stimulants becomes a chronic inebriate.

The second class, that of insane drunkards, is composed of persons who inherit constitutional defects, or are congenitally weak-minded. These persons do not usually become addicted to the use of alcoholic stimulants from an original necessity for them. Their nervous systems are so constituted that they at once feel the effect of powerful stimulants, and as it were come under their influence. Gradually the intellect becomes impaired, and the power of self-control is lost, so that some form of restraint becomes necessary.

Unfortunately no institutions exist which are exactly suited to the needs of either class. The private asylums, which are often conducted on certain dogmatic, religious, or hygienic principles, where patients are received as voluntary boarders, are not at all what is needed, and lunatic asylums or prisons are also lacking in proper facilities for treatment.

A severe case of alcoholic insanity may often do very well in a lunatic asylum; but the so-called insane drunkard creates an endless amount of trouble among insane patients. As the immediate effects of the alcohol begin to leave him he begins to show a restless, irritable, fault-finding, unreasonable disposition, and often he incites mischief among his fellow patients. Dr. Blodgett speaks of the demoralizing effects the surroundings have on the inebriate, and we have no doubt there are such effects; but we are inclined to think the drunkard does more harm than is done to him.

Dr. Blodgett speaks of the uncertain length of time of treatment now allowed for insane drunkards. We can bear witness that it is now impossible to find any place where a dipsomaniac can be held with any degree of certainty for a fraction of the time his case demands.

In Germany Dr. Blodgett found that fine roads had been built, and other work done out-of-doors by persons undergoing short sentences, often for drunkenness. If similar work could be done by chronic drinkers, under proper management for long periods of time, cures might in some cases follow. W. C.

— The Greek dramatist who originated the maxim "knowledge comes by suffering," might have said *per contra*, "suffering comes by knowledge." This remark is suggested by an editorial article of a contemporary, who has been made miserable by Koch's discoveries and theories. The writer very properly inveighs against straw in the street-cars; that it is productive of much filth and nastiness none will deny. But that the straw furnishes a culture nidus for the development of tuberculous germs expectorated into it by afflicted passengers is an apprehension which would keep none but a "bacterianist" awake o' nights. The opening of the mind's eye to all the different germs floating in our surroundings is certainly not conducive to a habit of rest and quietness.

— An exchange contains the following anecdote of Abernethy: Being actively engaged in inserting a cervical seton in "a noble patient," who had requested that this should be done, his patient exclaimed, "Sir, you give me excessive torture; will your seton do good." "No, sir," said the doctor. "Then why do you insert it?" screamed the patient. "Because," said the doctor, "you told me to do so, and I will get five pounds for my work."

Medical and Surgical Journal.

THURSDAY, MARCH 1, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the under signed, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

PASTEUR'S REPLY TO KOCH.

The *Revue Scientifique* (January 20, 1883,) contains Pasteur's reply to Koch's criticism of his methods and results in regard to the micro-organisms of disease and the value of attenuated virus for inoculative purposes. Pasteur's reply is preceded by his critic's remarks translated into French. A summary of Koch's attack was published in the Journal of January 18th.

It is to be regretted that abstract questions of scientific truth or error cannot be divorced from the personalities of discoverers and wrangling over priority, that "such anger should possess celestial minds." The expanse of the unknown is broad enough for all voyagers to pursue their way without collision. Such discussions seem to be the inevitable accompaniment of every discovery, and we should, perhaps, rather regard them in the light of the shifting wind, necessary to clear away fog banks, and make plain all the details of new and hitherto but fitfully illumined surroundings, or, to change the metaphor, they may be regarded as the reagent needed to clear up a cloudy liquid.

We must confess, however, that any advantages to be derived from the discussion by abstract science would have been quite as attainable had it been started by Koch on a somewhat different key, excellent though his brochure was as a mere polemical effort. The form which the dispute has taken is tinged with a certain acrimony, borrowed in part, perhaps, from the difference in nationalities, and in part from the difference in ages.

All will recognize that Pasteur has done some remarkable work — we may even, in the German fashion, call it epoch-making work — in the province of scientific medicine, and he duly invites attention to it in his reply to Koch. If the latter accomplishes as much more in twenty years from the date of his first publication in 1876 he may well congratulate himself. The science and the profession which they serve, and the public whom they benefit, will know how to honor both investigators. To Pasteur we must, probably, accord the full credit of solving the riddle of the nature of the ferment in what were formerly known as zymotic diseases, and of teaching the possibility and developing a method — if not the best method — of the attenuation and inoculation of the virus. Koch himself already acknowledges that the secret of splenic fever has been forced, and he now confesses that Pasteur must be credited with working out the attenuation of the active principle of disease ferments. In these respects at least Pasteur is a genuine "path-breaker," and has enabled Koch to make his own brilliant discovery of the bacillus tuberculosis.

The action of micro-organisms as ferments or tissue destroyers, and the attenuation of their virulence, are to be regarded as far-reaching principles acquired for science. There have been and will be mistakes in regard to the significance of this or that particular microbion, and the manner in which attenuation of a virus is brought about — whether directly by oxygen and temperature, or indirectly by these, and directly by increased activity in the organisms themselves — may have been misinterpreted; generalizations have been at times too hasty. These considerations should not be allowed to obscure the great principles involved.

Let Koch and his fellow-workers in this field continue, by absolutely pure cultures, to enlarge the number of infectious diseases having a demonstrable connection with a given microbion, by a more exact interpretation of the processes taking place to develop better methods of attenuation of virus, by greater experience to arrive at surer and safer methods of inoculation. There is work here for the time and energies and ingenuity of all interested in these questions, and there are still absolutely unknown regions in the domain of science for the bolder spirits who must be always in the vanguard, and are impatient of a neighbor however distant. There is no excuse here for the elbowing and crowding attendant upon long occupation.

DEFECTIVE VISION AMONG RAILROAD EMPLOYEES. ATTEMPT TO PREVENT EXAMINATIONS.

A bill has been introduced into the Legislature to stop any test of the form or color sense of employees except by the "railroad signals." Now it has been repeatedly and most clearly shown that not even the most skilled experts can detect color-blindness or decide on a man's eyesight by any use of the railroad signals, even where all question of collusion was eliminated. On the other hand a very few minutes with the most practical test used by the government will settle whether a man is safe or not.

A similar attempt to break down the law was tried last year and failed through the efforts of the gentlemen who have had experience in testing in this country. If the evidence then presented could have been put in print before the community and the Legislature, this second attempt would not have been heard of, because if ignorance is the cause, then a thorough knowledge of the subject would have been disseminated. There is, however, strong reason to believe that the plea of ignorance will not hold, and that the seemingly plausible argument of allowing experts or others to test *only* by railroad signals arises from the desire and hope to break down the law which practically prevents the color-blind or purblind from holding positions when their defects endanger our lives and property on railroads.

Another order passed the House which requires the railroad committee to consider if any change is requisite in the present law, with full power to send for papers and persons, employ a stenographer, and report in print.

There can now be no excuse for not having a full and complete report of all the evidence and arguments for the community to read and be instructed by. The railroad committee have the power to find out just what the corporations have done, whether they have obeyed the present law or not, and what methods they have employed to test, who they employed to examine, and what standard of requirement these persons exacted; in other words, whether the present law protects the community *and* the employee.

We have repeatedly stated the need of *legal* standards of requirement of visual power and color sense, and the absolute necessity of thoroughly competent experts to decide whether the individual employee came up to such standard, not set by the examiner.

THE CARTWRIGHT LECTURES FOR 1883.

DR. W. T. BELFIELD, lecturer on pathology in the Rush Medical College, Chicago, delivered the annual Cartwright lectures of the Alumni Association of the College of Physicians and Surgeons at Association Hall, New York, on the evenings of February 18th, 20th, 24th, and 27th. His subject was The Relations of Fungi to Disease, and having fully explained the two systems of bacteria culture adopted by Pasteur and Koch, he argued that the former was so liable to error as to be practically worthless as a basis for scientific investigation, while the latter, which was now coming into general use, had the advantage of being both simple and accurate. He showed that the study of bacteria and similar organisms was one of great difficulty on account of the morphological similarity of many species possessing widely different forms, and maintained that the only way of determining their true character was by means of isolated propagation and the inoculation of healthy tissue with the organisms thus obtained. Pasteur's method of accomplishing this was defective, owing to the impossibility of securing during the transfer of bacteria from flask to flask complete immunity from the accession from the air and instruments employed of other varieties of bacteria, which, by their more rapid breeding, might entirely crowd out the species under investigation. In Koch's method of propagation on gelatine, under microscopic observation, this source of error was avoided, and the pedigree of the bacteria ultimately selected for inoculation tests was, he believed, guaranteed with certainty. In opposition to the charges of Prof. H. D. Schmidt, of New Orleans, and other pathologists, that Koch's *bacilli tuberculosis* were either strings of fibrine or fat crystals, Dr. Belfield stated that they had been proved to stand tests which were fatal to both of these hypotheses. In the first place they propagated in sterilized breeding grounds, and in the second they absorbed aniline by endosmosis. In addition, after repeated breedings, the remote descendants of these bacilli had been found to produce tuberculosis in previously healthy organisms. Bacteria had been observed to give rise to anthrax by several competent investigators, and after the researches of Koch in regard to phthisis it seemed altogether probable that they would be found to be concerned in the causation of leprosy, erysipelas, diphtheria, septicæmia, cholera, yellow fever, and other diseases of infectious type. In the opinion of Dr. Belfield the experiments of Koch were conclusive, and he thought that the only possible objection that could be made to them and their results was that he might have erred in observation or in application. As, however, during a long course of pathological inquiry the German investigator had never as yet been found to commit an error, he did not consider such objections of much importance; but still, in order to finally set the question at rest, he thought it would be well that all Koch's experiments should be carefully repeated by a considerable number of competent mycologists.

THE NEW YORK CODE.

NOTWITHSTANDING all the touching and beautiful talk in the New York County and State Medical Societies in regard to the matter of "humanity" and the "elevation of the standing of the profession," it would at first sight seem rather a significant fact that the new code agitation was entirely inaugurated by specialists, and that every man who has taken at all an active part in securing its adoption and preventing its repeal is a specialist. It is probably, however, only a curious coincidence that the specialists are the ones who must necessarily derive the largest amount of pecuniary benefit from consulting with all "legally qualified practitioners of medicine." Among legally qualified practitioners our new code friends in New York will, no doubt, be much pleased to learn that they may now have the opportunity of meeting in consultation the noble and good Dr. Buchanan, lately of Philadelphia, who, we are informed on excellent authority, is now a registered physician in their city, and who, having graduated from Moyamensing, as well as a medical college, must have had special opportunities of study and experience, which the profession and public ought not to be slow in availing themselves of.

There is one point, involving to some extent the matter of consistency, which the ordinary Philistine medical mind is not quite capable of satisfactorily comprehending. How is it that the very gentlemen who are the most energetic and persistent supporters of the new code are also those who are most clamorous for the higher education of the profession, and are the leaders in establishing innumerable post-graduate courses to this end in every department of medicine and surgery, when by this same new code any Tom, Dick, or Harry who can buy, steal, or study six weeks for a diploma is placed on the same level as a graduate of Harvard or the University of Pennsylvania, who has spent a couple of years or more in the hospitals after receiving his degree?

MEDICAL NOTES.

— We have received a bound volume of one of our most valued exchanges, the *Sanitary Engineer*. Such publications, treating the problems presented by the massing of large populations in narrow limits, are of great value to preventive medicine, especially so when conducted with the scientific ability which characterizes our contemporary.

— An ingenious German has conceived and carried out a plan for the manufacture of gas from human fæces. "These are put in a retort, where they are not only dried, but decomposed by heat, the chief products being a light yielding gas, carbonic acid, tar, oil, and ammonia. As in ordinary gas works, the tar and oil are separated, the gases washed by being passed through water, the carbonic acid fixed, and the light yielding gas purified for use. There remain in the retorts the ash-constituents with a portion of carbon, which the inventor designates coke." The authority for this description, *Der Techniker*, informs its readers also that a Breslau Hotel has already been successfully lighted by means of this novel and presumably economical gas.

— The Health Officer of a city not famed for the general ignorance of its population considered it his duty to ask an individual who certified that a certain patient of his had died of malaria, what he meant by that term. The answer was as follows: —

"Malaria was the cause, poisoning the blood, producing dormant, parlytic, Costive, Chronic conditions, and inert Tumors; which terminated in Acute inflamation of the Liver, from taking a sudden cold.

"——— ——— Magnetic Physician."

— Dr. Traill Green, the President of the American Academy of Medicine, in the annual address delivered at Philadelphia in October, strongly sets forth the advantage, we might almost say the necessity, of a good preliminary education for those who are to study medicine, and gives abundant quotations from the most eminent men in the profession in favor of raising the standard of requirements for the degree of M. D. The speaker says: —

"In 1876, the year of our organization, we believe the Medical School of Harvard was the only school in this country which required a preliminary examination of intending medical students; now there are thirteen colleges which require the diploma of a literary institution or a preliminary examination, and three schools require a preliminary examination; one of the thirteen is not a regular school. This is progress, great progress, in six years, and the value now attached to a degree from a medical college requiring a preliminary examination, or a degree in the liberal arts, shows that the course pursued in these institutions is approved. It is quite common now to see Harv. written after the Harvard M. D. This will be followed, and the colleges which demand this examination will have public sentiment to sustain them, as well as that of students who are ambitious of good standing in our profession."

— One of our most egregious charlatans has added a second string to his bow in the shape of a subscription to a valuable mining stock which in the exuberance of his philanthropy he has decided no longer to keep to himself but to share with the dear public. But even such a double-headed swindle as this hides its diminished vertices before the operations of a quack in Missouri who fleeced a patient, then deliberately castrated him, and finally seduced his wife, which, to put it mildly, was adding insult to injury.

— An unmarried woman in France administered a teaspoonful of creosote to her infant with a fatal result. The post-mortem appearances were those of an escharotic poison, and the odor of creosote was marked. The woman, however, thought she was administering laudanum, and though she knew the latter drug to be a poison, the charge against her fell through, and she was acquitted. (*Annales de Hygiène*, February, 1882.)

— A regatta at Evesham, England, was followed by sixty-eight cases of typhoid fever among persons who attended it. An investigation developed the fact that nearly every one had drank lemonade at a refreshment stand, the proprietor of which had mixed the beverage with water from a disused well that was closed because it was known to be foul. Whether or not this well had been contaminated by a specific typhoid infection does not seem to have been established.

NEW YORK.

— The coroner's jury in the case of Michael Kelleher, who was recently killed by a fellow-patient in the alcoholic wards of Bellevue Hospital, have rendered the following verdict: "We find that Michael Kelleher came to his death by injuries inflicted by George E. Mahan; that in view of the evidence before us we believe that due care was not exercised by the officer in charge of the alcoholic ward, and that in our opinion the system of management is very defective; that the wards should at all times be in charge of a responsible employee, and that the orderlies are highly censurable for leaving the wards without putting the patients in charge of a responsible person. Further, we consider that the furniture of the rooms should be of such a character and so secured as to prevent the possibility of their use as weapons of offense by the patients." This jury comprised among its members three ex-mayors of the city, a physician, Dr. William Balser, and Mr. Townsend Cox, ex-commissioner of charities and correction. Among those subpœnaed to act on it, but who were excused from attendance, were General Grant, Jay Gould, and William H. Vanderbilt. During the inquest Coroner Marble explained that it was not because of any desire for notoriety that he had summoned so many prominent citizens to serve, but because he believed that the good name and welfare of the city institutions demanded in this case a more thorough investigation than usual.

— The treasurer's report of the Hospital Saturday and Sunday collection of 1882, which has just been made public, shows a falling off in the amount designated for special hospitals of no less than $6379.63, while the collection for the general fund is but $3893.10 less than that of last year. The total amount collected in 1882, which was at first reported to be only about $20,000, was in reality $32,262.72, against

$42,535.45 in 1881, and $44,371.97 in 1880. The causes of the decline in the amount are supposed to be the general depression of business as compared with the last two years, which manifests itself both in the trade and church collections, and the pressure of other benevolent causes at the time the collection was made. The report complains that comparatively few of the churches made any offerings. Thus out of fifty Presbyterian churches only eleven contributed this year; out of thirty-eight Baptist churches only one contributed; out of twenty Reformed (Dutch) churches only six contributed; out of fifty-five Methodist churches only four contributed; out of twenty-five Hebrew synagogues only eight contributed; and out of fifty-seven Roman Catholic churches, which furnish a very considerable proportion of the charity patients of the various hospitals of the Association, none have contributed to their support. The report then goes on to say that "a new and efficient committee has been appointed by the Association to promote the formation of trade auxiliary associations, and we are convinced that when it is once fairly and generally understood that for every dollar contributed through these auxiliaries the hospitals of the Association agree to furnish one day's care to any suffering tradesman of their own craft, auxiliaries will be formed as a matter of self-interest and self-protection in every trade, and, as in England, the workmen themselves will gladly unite with their employers in "penny-a-week" contributions towards providing for themselves or their families in times of accident or sickness."

— General Egbert Viele, the distinguished engineer, having recently been appointed one of the Commissioners of Parks, at the last meeting of the Park Board made a report in which he referred at length to the present unsatisfactory and unhealthy condition of Central Park, and made suggestions for its improvement. The park, he said, especially from the time that it had been officially but erroneously said to have been completed, had undergone a gradual but sure decadence until its complete renovation had become an imperative duty. The first step in its renovation, he said, was to restore it to a proper sanitary condition. To this end a careful sanitary inspection should be made as soon as the weather would permit of all the ponds, lakes, and collections of water, the sources of supply and the outlets, for the purpose of determining what measures should be adopted to prevent them from being detrimental to the public health. It was asserted by those having official knowledge of the fact that many miles of underground drains were obstructive to the flow of water, serving the sole purpose of retaining moisture in the soil. Another element of insalubrity was the over-planting found in the park, especially in the matter of shrubbery. These dense masses of low undergrowth served to impede the free circulation of air, to exclude the sun from the earth, and to keep the soil in a state of moisture that promoted vegetable decay, and gave rise to noxious vapors. It was, consequently, advised that a general but judicious pruning and transplanting should be done during the coming season.

— The annual address, delivered by the President, Dr. John J. Mitchell, of Newburgh, before the Homœopathic State Medical Society, which met in Albany February 13th, was on the Future of Homœopathy, and was based on the recent action of the regular State Society in regard to the code of ethics. The modest position of our homœopathic *confrères* may be gathered from the following selections from it: "As to success in our practice, we had presented statistics until we were tired, all demonstrating to the unprejudiced student that in the great mass of curable diseases our mortality was scarcely one half that of our professional brethren of the 'regular' school. . . . Now I submit that such a record as this alone ought in honesty to send every 'regular' practitioner to his study, and there by earnest work for a year or two he may acquire the ability to achieve a like success. . . . In regard to the resolution offered by the 'regulars' last year, we would state that we did not, directly or indirectly, ask any such action. The resolution having been adopted we hailed it as a good omen. We knew that we could do them good in the department of the practice of medicine to which for half a century we had specially devoted ourselves. Any response on our part was not necessary, for they were merely coming to the position that we had occupied for a score of years. . . . We shall be obliged to exist in our organized capacity until a chair of the theory and practice of homœopathy shall exist in all the medical colleges in our land. The time of which I dream will surely arrive."

— At a meeting of the County Medical Society, held February 26th, Dr. Charles Heitzman read a paper on The Intimate Nature of Tuberculosis: its Transmissibility and its Parasitic Origin; the points treated of being as follows: recent corroborations of Heitzman's discoveries by S. Stricker; inflammation in general; inflammatory nature of tuberculosis; constitutional origin of tuberculosis; Koch's bacilli.

— Dr. F. C. Valentine recently performed transfusion of blood in a case of partial asphyxia by illuminating gas. Six ounces of blood were injected, and the patient recovered; but as the number of respirations had begun to increase before the transfusion was resorted to, it seems probable that recovery would have taken place without the transfusion in consequence of the use of artificial respiration and the other ordinary means adopted.

— On the 14th of February Louise Stannard, a girl twelve years of age, died in the Mount Sinai Hospital, where she had been under treatment since the 26th of December last, for a bullet wound in the head. She was accidentally shot by a playmate with a toy pistol, and the bullet, which passed directly through the centre of her forehead, remained embedded in the brain up to the time of her death. The girl rallied from the first shock, and, although not permitted to leave the bed, recovered the use of all her faculties, and seemed in a fair way of recovery; when, on the fifty-first day after the receipt of the injury, she was suddenly seized with coma and in about ten minutes was dead.

— By the will of the late ex-Governor Edwin D.

Morgan, who died February 14th, $795,000 was left to charities. Of this sum the Woman's Hospital receives $25,000; the Home for Incurables, $5000; the House of Rest for Consumptives, $5000; the Society for the Relief of Sick Poor, $5000; the Society for the Relief of the Ruptured and Crippled, $20,000; the Presbyterian Hospital, $50,000; and the Manhattan Eye and Ear Hospital, $50,000. At the time of his death Governor Morgan was president of the board of managers of several of these institutions, and for a number of years had devoted a great deal of personal attention, as well as given large amounts, to them.

CHICAGO.

— The fortieth Commencement of Rush College occurred on the 20th inst. The number of the graduates was 179, and there were no honorary or *ad eundem* degrees. The Faculty appeared at the Commencement in the scholars' robes of the University of London for the first time. Prof. Moses Gunn gave the address. This had for its subject the ethics of the profession. He discussed the American Code, and considered the recent propositions to modify its rigor. That part of the Code which undertakes to regulate the conduct of the public toward the profession was foolish and inoperative. If it was proper for a regular physician to sit in a State Board of Health with irregulars it was inconsistent to object to the modification of the Code proposed by New York as to consultations. The Faculty gave a banquet in the evening to the alumni of the college at the Grand Pacific Hotel. Over 350 guests were present.

Miscellany.

THE TREATMENT OF DELIRIUM TREMENS.

A WRITER in the *Practitioner* (January, 1883), deprecates the old "homœopathic" treatment of alcoholism, that is, the administration of stimulants, even in reduced quantities, and also insists that in the severe cases opium, digitalis, and capsicum are powerless to effect a cure. It is true, he says, that in the first stage of alcoholism the appetite being fairly good, and the blood corpuscles in fairly normal proportions, chloral is quite sufficient to calm the excited circulation and produce sleep; but in the second stage, when the appetite is bad, the blood corpuscles deficient in quantity and shriveled, and the brain anæmic and starved, it is useless to expect relief from sedatives unless the brain is at the same time supplied with the nourishment it requires. Death, no doubt, in delirium tremens arises from want of sleep, but then it must be remembered that the want of sleep is caused by want of nourishment. The most important part of the treatment, then, is to improve the quality of the blood as quickly as possible by throwing into the system frequent supplies of light, nourishing, and easily digestible food, and the best way of accomplishing this end is by cutting off all stimulants and ordering liquid essence of beef and half a pint of milk to be taken alternately every two hours. As regards medicine, twenty-five grains of chloral with hirty minims of compound tincture of cardamoms in an ounce of water taken every four hours, after the beef tea, will be found most useful. Very little effect, though, is produced by the first dose of the chloral, inasmuch as the brain is without the nourishment it requires, but after the second dose the food begins to tell — some sleep, generally speaking, results, and this goes on increasing in proportion as the support is maintained. If nourishment is withheld sleep disappears, and the old delirium returns.

By this treatment the patient is generally free from all delusions in about thirty-six hours, but good strong liquid food must still be taken for some days, though not quite so frequently. When there have been from ten to twelve hours more or less continuous sleep, then it is advisable to give up the chloral, and give thirty minims of the compound tincture of gentian with five minims of the tincture of nux vomica three times a day for about three days. This restores the tone of the nervous system and stomach, and creates an appetite. A little tincture of euonymin may next be substituted for the nux vomica, and some Carlsbad salt may be given in the morning when required. By this treatment the duration of the delirium and the after-effects of the alcohol are very much lessened.

ELECTRIC STORAGE WORKS AND LEAD POISONING.

THE following, from the *Lancet* (January 27th), upon the above subject, may have a practical interest for physicians in our larger cities where various forms of electric accumulators are being experimented with.

We have not as yet heard of any cases of lead poisoning in connection with electric storage as occurring in this city or in New York.

"It seems that another manufacture is added to the list of those in which the health of the operatives engaged is likely to be injuriously affected by the poisonous effects that the materials employed have upon those who are constantly brought in contact with them. For some time past several cases of plumbism have occurred at the East-end of London among the laborers engaged in some large 'electric storage' works. Inquiry has shown that the lead in these cases is probably introduced into the system by means of the substance used to cover the plates of the storage batteries. We do not know the exact nature of this paste, but it is made on the premises, and part of the process consists of mixing a powder containing lead with strong sulphuric acid. During the procedure fumes are given off. In one of the cases brought under our observation the toxic effect due to lead had been rapidly induced, and the patient exhibited, in addition to the usual blue line on the gums, the rarer phenomenon of extensive deposit on the buccal mucous membrane. But the cases of plumbism have not been limited to those who prepare the paste, since several instances have occurred among those handling it in applying it to the plates. It is probable that the majority of the cases have arisen from the men not being fully acquainted with the dangerous nature of the material they were dealing with. It is to be hoped, now that attention has been drawn to the matter, necessary precautions will be taken by the management of the companies engaged in the manufacture of these batteries to prevent any more cases occurring among their work-people. The use of masks in rooms where the paste is made and the fumes given off, and the wearing of stout leather gloves, often renewed, by those who have to apply the paste to the

plates, would, we think, check the evil. An inspector of factories ought, however, at once to visit and report upon these establishments, and suggest any further precautions that might occur to him after inquiring into the nature of the various operations carried on."

EXPERIMENTS UPON RABBITS WITH CONVALLARIA MAJALIS.

THE following are given as the results of his experiments upon rabbits with convallaria majalis, by Dr. Isaac Ott, in a paper published in the *Archives of Medicine* for February: —

"These experiments demonstrate: —

"(1.) That convallaria increases the arterial tension greatly at the same time as the heart begins to beat more frequently; that the heart begins to fall before the tension.

"(2.) The decrease of cardiac frequency is not due to cardio-inhibitory excitation, but to an action on the heart itself, probably its muscular structure.

"(3.) The rise of arterial tension is mainly due to stimulation of other vaso-motor apparatus than the main monarchical vaso-motor centre.

"(4.) The drug causes clonic spasms.

"If we compare the action of this drug with digitalis, it is found that the slowing of each is due to different causes: with digitalis it is due to a cardio-inhibitory excitation; with convallaria some other part of the heart is the agent. Digitalis, as a rule, does not primarily accelerate the heart; convallaria does. After section of the spinal cord digitalis is powerless to increase arterial tension, whilst convallaria does. If now we compare the action of this drug with other cardiac agents, as aconite, urechites suberecta, or astragalus mollissimus, it is found that it does not belong to this group. As aconite, urechites, and astragalus resemble each other in their action, yet many important differences exist, so does convallaria differ from digitalis in several important particulars. The great rise of arterial tension would indicate its value in dropsies, reasoning upon Ludwig's theory of renal secretion. It is a drug which must not be pushed to any great extent, if I am to judge from a rather extensive experience with cardiac agents upon the hearts of the lower animals."

TREPHINING FOR INTRA-CRANIAL ABSCESS.

IN the *Dublin Medical Journal* for January, 1883, is reported a case in which the operation of trephining was performed on account of an abscess resulting from a fall in the hunting field. The patient was unconscious for two hours after the accident. At the end of a fortnight he was removed to Dublin, suffering much from pain over the upper part of the occipital bone on the right side, and also much gastric irritability and general debility. Any motion, such as driving, intensified the pain, and caused nausea. On examination a shallow depression, the size of a florin, was found, bound by a well-defined margin, at the situation where he complained of the pain. The diagnosis of fracture, with the subsequent formation of an abscess within the cranium at the seat of the lesion, was made. An exploratory incision was made down to the bone, and a small purulent collection was opened into. Subsequently the operation of trephining was undertaken, and on exploring the bone a small circular opening through the skull, about two lines in diameter, was discovered. Through this opening, situated on the upper part of the occipital bone, some purulent matter oozed. A circular piece of bone was then removed with the trephine to provide free exit for the pus. An abscess cavity, from which almost half an ounce of pus welled up, was opened into. The inner surface of the piece of bone removed was deeply eroded. The cavity of the abscess was washed out with a weak solution of carbolic acid. Subsequently the patient experienced an attack of erysipelas of the head and neck, from which, however, he recovered, and nothing further occurred to interrupt the process of complete recovery.

A REMARKABLE CASE OF GLASS SWALLOWING.

THE *Australasian Medical Gazette* (December, 1882) contains the report of a case in which a German military officer in Berlin swallowed, in November, 1875, a piece of glass which had been broken from the neck of a bottle, and had fallen into the glass from which the individual was drinking beer. The fragment was of triangular shape, the hypothenuse one inch, the base three eighths inch, and the thickness one eighth inch. At first there was only a sharp pain felt in the region of the arytenoid cartilage. In about an hour a prolonged fit of coughing came on, which was frequently repeated. Dyspnœa, dysphagia, hæmorrhage, and acute pain marked the next few weeks, and attempts to remove the body were unsuccessful. Then he began to have intermittent febrile attacks, with vomiting at first of dark-colored coagulated blood, and later of blood and very fetid pus. The latter caused relief (for the first time) to the pain, and fall of temperature. Swallowing also became easier. In March, 1876, a swelling was noted in the region of the right fossa infraclavicularis, and the patient could feel the gradual descent of the pain toward the clavicle, and later along the sternum. While he was in a hospital for a possible operation the pain fixed itself just below the xiphoid cartilage. Vomiting became increasingly frequent, with cough and chills. Blood was vomited. Then an acute pyrexia developed, with vomiting of pus, which again relieved the pain, and enabled the patient for the first time in weeks to straighten himself up from the nearly right angle at which his pain had constrained him to keep his body. No operation was undertaken. In January, 1877, another exacerbation occurred which was very nearly fatal. He was then obliged to be fed with an œsophageal tube. Hypodermic injections of chloroform at the seat of pain were given with such frequency as to cause a localized spot of inflammation. This became gangrenous and sloughed. Through this opening a probe detected the foreign body, and an enlargement of the wound permitted its extraction. Speedy and complete recovery followed.

— From a secular contemporary, concerning the faith cure: "Have you ever tried the faith cure?" asked a long-haired, sallow-faced stranger, addressing a gentleman who sat behind him in a street-car. "I have," was the answer. "Do you believe in it?" "I do." "May I ask, then, of what you were cured?" "Certainly. I was cured of my faith."

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 17, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	623	237	15.58	22.26	6.20	2.39	.16
Philadelphia	846,984	367	115	13.60	9.52	7.62	.27	.54
Brooklyn	566,689	269	103	17.07	24 86	6.68	5 56	—
Chicago	503,304	220	87	20.00	19.54	6.36	2.73	1.36
Boston	362,535	156	38	16.00	19.84	8.32	3.20	—
St. Louis	350,522	171	61	25.11	11.68	7.59	7.00	—
Baltimore	332,190	204	84	44.67	4.90	8.82	3.43	24.99
Cincinnati	255,708	145	53	19.80	20.69	4.82	6.90	—
New Orleans	216,140	147	33	26.84	11 56	.68	—	14.28
District of Columbia	177,638	89	30	13.63	21.58	3.41	5.68	—
Pittsburg (1883)	175,000	93	29	24.76	12.92	4.31	—	1.08
Buffalo	155,137	54	16	25.90	11.55	9.25	11.10	—
Milwaukee	115,578	54	26	24.05	11.55	11.55	3.71	—
Providence (1883)	116,755	48	14	20.83	8.32	4.16	—	—
New Haven (1883)	73,000	25	7	20.00	12.00	—	—	—
Charleston	49,999	29	5	—	10.34	—	—	—
Nashville	43,461	20	6	10.00	10.00	—	—	5.00
Lowell	59,485	20	9	25.00	5.00	5.00	10.00	—
Worcester	58,295	20	6	5.00	25.00	—	5.00	—
Cambridge	52,740	21	4	23.80	19.04	19.04	—	—
Fall River	49,006	25	8	12.00	28.00	4.00	—	—
Lawrence	39,178	15	4	6.66	—	—	—	—
Lynn	38,284	14	5	7.14	14.28	—	—	—
Springfield	33,340	7	3	14.28	—	—	—	—
Salem	27,598	11	3	9.09	9.09	—	—	—
New Bedford	26,875	10	2	10.00	30.00	—	—	—
Somerville	24,985	11	3	27.27	18.18	9.09	9.09	—
Holyoke	21,851	11	5	27.27	9.09	18.18	—	—
Chelsea	21,785	4	1	25.00	—	25.00	—	—
Taunton	21,213	7	2	14.28	42.84	—	—	—
Gloucester	19,329	5	2	—	40.00	—	—	—
Haverhill	18,475	9	3	—	—	—	—	—
Newton	16,995	0	0	—	—	—	—	—
Brockton	13,608	5	0	—	—	—	—	—
Newburyport	13,537	5	1	—	—	—	—	—
Fitchburg	12,405	2	1	—	—	—	—	—
Malden	12,017	1	0	—	—	—	—	—
Twenty-two Massachusetts towns	165,577	52	11	11.52	19.20	1.92	3.84	—

Deaths reported 2969: under five years of age 1017: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 568, lung diseases 491, consumption 470, diphtheria and croup 183, scarlet fever 90, small-pox 80, typhoid fever 51, diarrhœal diseases 31, malarial fevers 29, cerebro-spinal meningitis 28, puerperal fever 21, whooping-cough 20, measles 19, erysipelas 16. From *typhoid fever*, Pittsburg 12, Philadelphia 11, District of Columbia and Providence four each, Brooklyn, Boston, and St. Louis three each, New York, Chicago, Baltimore, and New Orleans two each, Buffalo, Salem, and Somerville one each. From *diarrhœal diseases*, New York 10, St. Louis five, Pittsburg three, Brooklyn, Boston, and Cincinnati two each, Chicago, Baltimore, New Orleans, Milwaukee, Providence, Cambridge, and Holyoke one each. From *malarial fevers*, New York 12, New Orleans seven, Brooklyn five, Chicago, St. Louis, Baltimore, New Haven, and Springfield one each. From *cerebro-spinal meningitis*, New York eight, New Orleans five, St. Louis three, Chicago and Buffalo two each, Cincinnati, Pittsburg, Providence, Nashville, Lowell, Fall River, Lawrence, and Woburn one each. From *puerperal fever*, Chicago five, St. Louis and Baltimore three each, Boston and Peabody two each, New York, Brooklyn, Cincinnati, Milwaukee, New Haven, and Lowell one each. From *whooping-cough*, Chicago and Cincinnati three each, Brooklyn, St. Louis, Pittsburg, and New Haven two each, New York, Philadelphia, New Orleans, Milwaukee, Lynn, and New Bedford one each. From *measles*, New York and Philadelphia seven each, Cincinnati three, Chicago and New Haven one each. From *erysipelas*, Chicago six, New York, Cincinnati, and Providence two each, St. Louis, Milwaukee, Fall River, and Taunton one each.

One hundred and thirty-eight cases of small-pox were reported in Baltimore, Pittsburg four; diphtheria 20, scarlet fever 17, and typhoid fever three, in Boston; scarlet fever 12 and diphtheria seven in Milwaukee.

In 41 cities and towns of Massachusetts, with a population of 1,309,495 (population of the State 1,783,086), the total death-rate for the week was 16.09 against 21.25 and 20.78, for the previous two weeks.

In the 28 towns of England and Wales, with an estimated population of 8,620,975, for the week ending February 3d, the death-rate was 23.7. Deaths reported 3910: acute diseases of the respiratory organs (London) 382, whooping-cough 106, scarlet fever 103, fever 77, measles 46, diarrhœa 40, diphtheria 31, small-pox (London five, Liverpool one) six. The death-rates ranged from 17.9 in Portsmouth to 35.3 in Sunderland; Brighton 18.8; London 21.7; Norwich 22.1; Newcastle-on-Tyne 23.7; Birmingham 24.5; Leeds 25.5; Liverpool 30.9; Blackburn 34.6. In Edinburgh 19.2; Glasgow 30; Dublin 34.

For the week ending January 20th, in 170 German cities and towns, with an estimated population of 8,516,807, the death-rate was 26.1. Deaths reported 4267: under five years of age 1850; consumption 668, lung diseases 487, diphtheria and croup 203, scarlet fever 75, typhoid fever 54, whooping-cough 49, measles and rötheln 48, puerperal fever 17, small-pox (Königsberg, Elbing, Breslau, Neisse, and Darmstadt one each) five. The death-rates ranged from 14 in Karlsruhe to 39 in Chemnitz; Königsberg 26.2; Breslau 30; Munich 26.2; Dresden 23.8; Berlin 25; Leipzig 25.3; Hamburg 26.6; Cologne 23.7; Frankfort 21.2; Strasburg 26.3.

For the week ending January 27th, in the Swiss towns, population 494,390, there were 42 deaths from lung diseases, consumption 39, diphtheria and croup 13, diarrhœal diseases 12, typhoid fever six, scarlet fever one, puerperal fever one. The death-rates were, at Geneva 15.4; Zurich 20; Basle 23.8; Berne 28.2.

For the week ending February 3d, in the Swiss towns, population 494,390, there were 33 deaths from consumption, lung diseases 26, diphtheria and croup 13, diarrhœal diseases nine, typhoid fever nine, puerperal fever three, small-pox one. The death-rates were, at Geneva 19.5; Zurich 10; Basle 24.6; Berne 22.6.

The meteorological record for the week ending February 17th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
February, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 11	29.928	30	35	15	88	77	100	88	SE	NW	NW	7	3	1	X	O	O	—	—
Mon., 12	30.256	30	36	23	60	60	64	61	NW	W	W	16	15	9	C	C	C	—	—
Tues., 13	30.423	29	42	18	45	53	77	58	N	W	W	4	6	9	C	C	C	—	—
Wed., 14	30.156	32	45	21	61	60	88	70	W	SW	NE	12	5	7	C	O	X	—	—
Thurs., 15	30.313	26	33	18	77	70	94	80	E	NE	NW	22	10	4	X	O	O	—	—
Fri., 16	30.258	36	40	24	77	89	100	89	NW	SW	SW	3	3	6	S	G	G	—	—
Sat., 17	29.992	49	59	36	86	75	65	75	SW	SW	W	12	12	12	G	C	O	—	—
Means, the week.	30.189	33	59	15														39.10	.91

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., sleeting; R., rain; T., threatening; X., light snow.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM FEBRUARY 9, 1883, TO FEBRUARY 23, 1883.

DELOFFRE, AUGUSTUS A., captain and assistant surgeon. Relieved from further duty in this Department. S. O. 28, Department of the Missouri, February 5, 1883.

TAYLOR, B. D., captain and assistant surgeon. Granted leave of absence for one month, on surgeon's certificate of disability. Paragraph 2, S. O. 13, Department of Texas, February 1, 1883.

NEWTON, R. C., first lieutenant and assistant surgeon, is relieved from duty at Fort Cummings, N. M., and will proceed to Fort Sill, I. T., and report to the commanding officer for duty. S. O. 28, Department of the Missouri, February 5, 1883.

CLEARY, PETER J. A., captain and assistant surgeon. Granted leave of absence for four months on account of sickness, to take effect January 3, 1883, in extension of his authorized absence on certificates of disability. Paragraph 6, S. O. No. 40, A. G. O., February 16, 1883.

HEIZMANN, CHARLES L., captain and assistant surgeon. To be relieved from duty in the Department of the Columbia. S. O. 12, Department of the Columbia February 8, 1883.

A. B. HAGGETT, paymaster of the Middlesex Mills at Lowell, has been appointed a member of the Massachusetts Board of Health, Lunacy, and Charity in place of G. P. Carter, Esq., whose term had expired.

NOMINATIONS by the Governor to the Board of Trustees of the Massachusetts General Hospital, as lately announced, were withdrawn, and the members of last year were reappointed with one exception.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the Society will be held at No. 19 Boylston Place, on Monday, March 5, 1883, at eight o'clock P. M. Reader, Dr. G. H. M. Rowe. Subject, The Training of Nurses. Drs. J. H. Whittemore and W. L. Richardson will open the discussion. Dr. M. H. Richardson will report An Unfavorable Case of Empyema, with Demonstration of the Thorax.

C. M. JONES, *Secretary.*

THE SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY will meet on Wednesday, March 7th, at 7.30 P. M. Congenital Dislocation of the Hip, with Exhibition of Patients, Dr. Abner Post. Contractions of the Knee-Joint; Reports of Cases and Exhibition of Apparatus, Dr. E. H. Bradford, Dr. F. S. Watson, Dr. H. L. Burrell. H. C. HAVEN, *Secretary.*

BOOKS AND PAMPHLETS RECEIVED. — The Treatment of Acute Rheumatism. An Analysis of the Results obtained under Different Systems of Treatment in St. George's Hospital during the Years 1877 and 1878. By Isambard Owen, M. D. London: J. & A. Churchill.

Experimental Pharmacology. A Hand-Book of Methods for Studying the Physiological Actions of Drugs. By L. Hermann, Professor of Physiology in the University of Zürich. Translated with the Author's permission, with Notes and Additions, by Robert Meade Smith, M. D. Philadelphia: Henry C. Lea's Son & Co. 1883.

Report of the Pennsylvania Hospital for the Insane for the Year 1882. By Thomas S. Kirkbride, M. D., LL. D., Physician-in-Chief and Superintendent. Philadelphia. 1883.

A Manual of Histology. Edited and prepared by Thomas E. Satterthwaite, M. D., of New York, in association with Drs. Thomas Dwight, J. Collins Warren, etc., etc. Second Edition, enlarged and revised, containing two hundred and two Illustrations, with an Appendix. New York: William Wood & Co. 1882.

Consultation Chart of the Eye Symptoms and Eye Complications of General Diseases. Arranged after Foerster and others by Henry G. Cornwell, M. D. Columbus, Ohio.

Third Biennial Report. Kansas State Charitable Institutions. 1881–1882.

The Sanitary Engineer. Vol. VI. June to November, 1882. New York.

The Best Method of Treating Operation Wounds. By Henry O. Marcy, A. M., M. D., of Boston. (Reprint.)

The Placental Development in Mammals. A Unity of Anatomical and Physiological Modality in all Vertebrates. By Henry O. Marcy, M. D., of Boston. (Reprint.)

A Winter Climate for Invalids. The Gulf Coast of Florida. By R. J. Levis, M. D. (Reprint.)

Studies from the Pathological Laboratory of the University of Pennsylvania. No. X. The Pathogenesis of Secondary Tumors. By Henry Wile, A. B., M. D. Rochester, N. Y. (Reprint.)

Studies from the Pathological Laboratory of the University of Pennsylvania. No. XI. The Bacillus Tuberculosis, and some Anatomical Points which suggest the Refutation of its Ætiological Relation with Tuberculosis. First Communication. By H. F. Formad, B. M., M. D. (Reprint.)

The Prevention of Insanity. By Nathan Allen, M. D., of Lowell.

Scrofula and its Gland Diseases. An Introduction to the General Pathology of Scrofula, with an Account of its Histology, Diagnosis, and Treatment of its Glandular Affections. By Frederick Treves, F. R. C. S. Eng. Philadelphia: H. C. Lea's Son & Co. 1883. Price 10 cents.

The Compend of Anatomy for Use in the Dissecting Room and in preparing for Examinations. By John B. Roberts, A. M., M. D. Third Edition. Philadelphia: C. C. Roberts & Co. 1882.

The Physiology of Alcoholics. An Address by William B. Carpenter, M. D., LL. D., F. R. S. New York: National Temperance Society and Publication House. 1883.

Annual Report of the President and Treasurer of Harvard College. 1881–1882.

Bromide of Ethyl. The most Perfect Anæsthetic for Short Surgical Operations. By Julian J. Chisholm, M. D.

Naso-Antral Catarrh and its Treatment. By W. H. Daly, M. D. Pittsfield, Mass. (Reprint.)

The Law of Human Increase. By Nathan Allen, M. D. (Reprint.)

Original Articles.

OCULAR SYMPTOMS AS LOCALIZING SYMPTOMS.[1]

BY S. G. WEBBER, M. D.

PARALYSIS or irregular action of the muscles of the eye has been long noticed as associated with cerebral lesions — indeed it would scarcely be possible to overlook such a prominent symptom; but the reference of definite ocular symptoms to definite lesions was not possible till there was a more accurate study of both than prevailed only a few years since. Andral, in 1834, mentions the "deviation of the eye in some one direction," and speaks of strabismus as then most generally observed.

Conjugate deviation of the eyes, and especially when associated with rotation of the head, could not fail to attract notice when seen; as, however, it is generally a fugitive symptom, lasting only a few hours or days, it would often not be seen, and at other times would not be thought important. In 1858 Prevost called attention to this group of symptoms — in cases of lesion of one of the hemispheres, with deviation towards the side where the lesion is situated — in cases of lesion of the cerebral isthmus, towards the opposite side.

This symptom is of comparatively little value as diagnostic of lesion of the hemispheres; it simply reveals that fact. It may occur with superficial lesions, or with lesions of the cerebral substance, becoming more frequent as the lesion is situated nearer the corpus striatum and the fibres radiating from the cerebral peduncle.

When conjugate deviation of the eyes occurs as the result of a lesion of the pons the symptom is more persistent; it is towards the hemiplegic side, away from the lesion in case of paralysis; away from the hemiplegic side towards the lesion in case of spasms; at least this is the classical statement.

So many important nuclei and commissures are grouped together around the pons Varolii that any symptom connected with lesions in that vicinity is an interesting subject to study.

The anatomy of the medulla, pons, and crura, gives valuable assistance to an understanding of the symptoms associated with disease of those parts.

The seventh nerve enters the pons at one side, passes inwards and backwards nearly to the floor of the fourth ventricle to the eminentia teres; the course is not straight but curvilinear. At the eminentia teres the fibres turn downwards, pass just below the floor of the ventricle for a short distance, then turn again, run outwards, forwards, and slightly upwards, to their nucleus, the inferior facial nucleus. Some of the fibres of the facial probably run into a nucleus found at the bend of the nerve as it turns downwards, the superior nucleus of the facial, the nucleus of the sixth nerve.

The sixth nerve or the abducens enters the medulla just at its junction with the pons, and passes backwards through the pons to the above nucleus.

The third nerve enters the tegmentum of the crus cerebri near the upper (anterior) border of the pons. As soon as the nerve enters the crus the fibres separate, some pass with only a gentle curve to the nucleus at the edge of the gray substance surrounding the aqueduct of Sylvius, others spread out in a fan shape, but after passing or crossing the anterior cerebellar peduncle the fibres converge again and enter the same nucleus.

There is a band of longitudinal fibres running near the floor of the fourth ventricle, called the *posterior longitudinal bundle of the tegmentum*, by Huguenin.[2] This bundle of fibres is shown on cross sections by Wernicke,[3] who says [4] that it looks as though a large part of this bundle arose from the nucleus of the third nerve.

Duval has made longitudinal sections so as to show the course of the fibres composing this bundle, and has found that they take their origin below from the nucleus of the sixth nerve (Figs. 1, 2), cross the upper branch of the knee of the seventh nerve, then approaching each other they reach the nucleus of the fourth nerve; before quite reaching that nucleus, however, small bundles separate from the internal



FIG. 1.



FIG. 2.

FIG. 1. Longitudinal section, parallel with floor of fourth ventricle; showing the thin bundle of fibres, running from the nucleus of the sixth nerve, in the bend of the seventh, which decussates and is lost at the nucleus of the third nerve. *After Duval.*

FIG. 2. Transverse section, showing the decussation of the same bundles of fibres, and illustrating how they pass into the third nerve without running into its nucleus. *After Duval*

border of each, decussate and pass forwards (downwards) to join the third nerve. Many more of the fibres of these bundles unite with the fourth nerve. The fibres which pass from the longitudinal bundles to the third nerves form the anterior and internal fasciculi of those nerves.

Huguenin [5] says, in regard to the union of the abducens with the nucleus of the oculo-motor and trochlear, that he has seen, on horizontal section, fibres which, decussating, seem to unite the upper portion of the abducens nucleus with the nucleus of the oculo-motor nerve.

By the above commissural arrangement is explained the harmonious action of the eyes in lateral vision. It is not necessary here to consider all the advantages of such a relation of nuclei. There are times, however, when it is desirable that the eyes should not act thus together in lateral vision. When it is wished to look at near objects, as in reading, the internal recti must act with each other independently of the external recti. For this purpose these muscles are also supplied with nerve fibres from the proper nucleus of the third nerve without the intervention of the abducens nucleus.

Hunnius [6] gives a diagram of the innervation of the

[1] Read before the Boston Society for Medical Improvement, February 12, 1883.

[2] Allgemeine Pathol. der Krankheiten des Nervensystems, page 137.

[3] Lehrbuch der Gehirnkrankheiten, Bd. i., from page 85 to page 141.

[4] Page 109.

[5] Allgemeine Pathol. der Krankheiten des Nervensystems, Zurich, 1873, page 170.

[6] Zur Symptomatologie der Brückenerkrankungen und über die Conjugirte Deviation der Augen bei Hirnkrankheiten, Bonn, 1881.

sixth nerve from the brain and its possible connection with the third.

From the cerebral cortex *G*, *G'*, arises the motor tract, *m*, *m'*, which conveys the impulse for turning the eyes sideways to the abducens centre, *a*, *a'*; these decussate somewhere in their course, probably in the anterior part of the pons. From the abducens nucleus *a*, *a'*, arises the abducens nerve passing to the external rectus *Re*, *Re'*; also from the same nuclei bundles of nerve fibres, which decussate, pass to the opposite third nerves *o*, *o'*, which innervates the internal rectus *Ri*, *Ri'*. Hunnius represents also a centre *c* for converging action of the two eyes, which is also united with the cerebral cortex. *B* represents the pons.

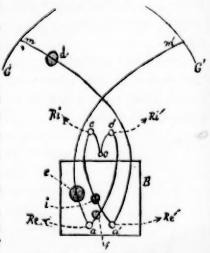


FIG. 3. *After Hunnius.*

In the figure the shaded circles, *d*, *e*, *i*, *f*, are given by Hunnius to represent lesions so located as to give rise to different combinations of deviation, conjugate or otherwise.

A lesion situated as at *d* before decussation of the fibres, innervating the external rectus nucleus, will give rise to the conjugate deviation depending upon lesion of the hemisphere. A lesion after decussation as at *e* or affecting the nucleus of the sixth will produce symptoms the opposite of the former. There should be, then, in paralyzing lesions conjugate deviation towards the affected limbs, away from the lesion, or if the lesion is irritative there should be spasm or contraction of the opposite limbs with spasmodic deviation away from the limbs, towards the lesion, usually without rotation of the head. A consideration of the diagram will suggest several possible combinations of lesions with symptoms which rarely or never occur. It is possible to have the commissural fibres running from the sixth to the third nucleus affected before decussation, as at *f*, the sixth nucleus escaping; this might give rise to divergent strabismus. It is scarcely possible to have these fibres affected after decussation, and not find the other motor ocular fibres also affected, for the decussation occurs close to the nucleus of the third nerve.

I saw the first case through the courtesy of Dr. Edes, who was at that time in attendance. It is an instance of conjugate deviation of the eyes from paralysis due to lesion of the nucleus of the sixth nerve. There were other symptoms localizing the lesion in the pons, as myosis; the fact that the fifth and seventh nerves were affected on the same side with the limbs, but the sixth on the opposite side, alternate paralysis of the sixth; also the extreme anæsthesia would aid to a diagnosis of locality.

CASE I. HÆMORRHAGE INTO LEFT SIDE OF PONS, EXTENDING INTO CRUS CEREBRI AND BURSTING INTO FOURTH VENTRICLE; RIGHT HEMIPLEGIA AND RIGHT FACIAL PARALYSIS; CONJUGATE DEVIATION TO RIGHT.

A. B. There is a little uncertainty as to the manner in which this patient was first attacked. The most probable history is that he had been accustomed to the use of liquor; once before he had been similarly affected; had headache, though not very severe, preceding the present attack, and suffered just before from vertigo. The day on which he was taken sick he returned home from work at noon, felt badly in his head, and was dizzy; went out to be in the fresh air and to get a cup of tea, and fell. It is not certain that he was unconscious. He was not entirely paralyzed on either side. He was brought to the hospital about five o'clock in the afternoon. There was partial paralysis of the left eyelid; both pupils were rather small and responsive to light, the right a little larger than the left. The mouth was drawn to the left; the tongue was protruded to the right. There was complete paralysis of the right hand and arm, partial paralysis of the right leg. On testing for ankle clonus a tremor was excited in the whole right leg, continuing as long as the toes were held; there was no such action on the left side. Tendon reflex was very slight, if any, on either side; cremaster reflex was present on the left, not on the right; there was no marked abdominal or epigastric reflex on either side. There was no lead line. On being spoken to he apparently heard perfectly well, but was unable to make himself understood. He was able to swallow only liquids in small quantities slowly. On being shown written questions he thought he could see if he had his glasses, but was unable to do so when they were given him. Temperature on entrance was 98.4° F., pulse 64. Urine was normal in color, neutral, specific gravity 1014, albumen, a trace; sediment, a little pus, a few hyaline and granular casts.

Three days after entrance he was lying on his back, head in the median line, eyes nearly closed, mouth slightly drawn to the left. He was unable to speak, but protruded his tongue when told to do so, and responded in a limited degree to other requests. Sight was not entirely lost, for he followed the finger with his eyes. The left hand and arm and left leg were moved spontaneously, but the limbs of the right side were motionless. Any motion of the face was confined to the left side, the right remaining motionless. The eyelids were both nearly closed, both could be raised, but not fully. The right pupil was of medium size, and responded readily to light; the left pupil was very small, and responded only slightly to light. The left eye did not turn outwards, but moved with tolerable freedom in all other directions; the right eye could not turn inwards, but moved outwards readily, and upwards and downwards with less freedom. The tongue was protruded strongly to the right. Swallowing was very difficult.

Sensation was seemingly entirely wanting on the right side of the face and in the right limbs; a knife stuck into the right hand or leg gave rise to no sign of pain, but a much gentler prick on the left side immediately excited opposition.

Cutaneous reflexes were absent or very slight on the right, but well marked on the left.

There was, then, paralysis of the third nerve on the right in the fibres going to the internal rectus, weakness on both sides in those fibres going to the eyelids, and irritation of the pupillary fibres on the left. The fifth nerve was paralyzed on the right, not on the left. The sixth nerve was paralyzed on the left, was intact on the right. The seventh nerve was paralyzed on the right as to its lower branches. The hypoglossal was paralyzed on the right. The other nerves of the medulla oblongata could not be satisfactorily examined

on account of the patient's condition. The difficulty in swallowing and talking did not necessarily arise from paralysis of those nerves, though it might be so. The limbs were totally paralyzed on the right both as to motion and sensation. Reflex action was seriously impaired or lost on the right.

The temperature was rather high during the first few days; it then was nearly or quite normal, once a degree below normal, and again ran up to 105° F. at the time of his death.

A lesion of the hemispheres is rarely, if ever, accompanied with such serious disturbance of sensation as was found in this case. This feature would limit the locality of the lesion to the crus cerebri or pons or medulla, that is, it must be below the anterior extremity of the crus.

Both the seventh and fifth nerves were paralyzed on the same side as the limbs, therefore the lesion must be above the origin of those nerves, that is, above the middle of the pons.

There was conjugate deviation of the eyes towards the right, partial ptosis on both sides, great contraction with very slight mobility of the left pupil. Conjugate deviation of the eyes towards the sound side in hemiplegia of cerebral origin is not very rare when the hemispheres are affected, and in that case the head is usually turned in the same direction; as Prevost said, the patient seems to be trying to look at the lesion in his brain.

Conjugate deviation of the eyes towards the hemiplegic side has been found heretofore only in cases of lesion of the pons. Nothnagel says that persistent unilateral myosis is found in disease of the pons, and on the same side with the lesion. When the sensation of the limbs is seriously impaired in lesions of the pons it is the external portion which is affected rather than the median.

From these data a diagnosis was made locating the lesion in the anterior and outer portion of the pons.

As to the nature of the lesion, the mode of onset excluded all those which, commencing almost imperceptibly, gradually extend and increase in severity, such as interstitial changes and tumors, excepting the rare cases in which tumors are latent, till a sudden apoplectic attack shows their presence. This is so rarely the case that practically it may be excluded unless further consideration should oblige a return to it.

Hæmorrhage and embolism habitually give rise to apoplectiform attacks. Three symptoms or groups of symptoms will enable us to exclude the latter, — there were prodromic symptoms, — headache, vertigo for some days preceding the attack, and these sensations rather more severe just before it occurred; the loss of power was not most marked immediately after the shock, but the dullness and paralysis steadily increased from the first. There was no record of his temperature until some hours after the attack, but from the time it was first taken there was a rise, interrupted by a slight fall towards midnight. This rise was more steady and higher than would probably be found in embolism. Considering the locality of the lesion the chances are in favor of a hæmorrhage; if the basilar artery were plugged it was probable that death would have resulted sooner, that the symptoms would have been less markedly unilateral; also an embolism of that artery is very rare, and an embolism of its branches is much more rare. For these reasons a diagnosis of hæmorrhage was made, occurring primarily in the anterior and external portion of the pons, but as the symptoms had been steadily increasing in gravity it was thought that the blood had torn up the tissue of the pons to a certain extent around the original focus.

Autopsy made by Dr. Gannett. Only the head was examined. The pia mater was of the usual thickness. Both vertebral arteries about three centimetres before uniting were dilated to about twice their usual calibre; their walls at these points were thickened and of an opaque yellow color. The lateral ventricles each contained about five cubic centimetres of clear fluid; the ependyma was everywhere smooth and shiny. The brain substance in general was quite firm, puncta cruenta well marked. The gray cortex of its usual color and thickness. Nothing unusual was observed on section of the basal ganglia except a small hæmorrhage into the inner portion of the outer capsule. The anterior half of the left side of the pons was represented by a soft, semi-fluid, red mass; in its posterior half only the outer portion of the pons presented this appearance. The outer portion of the anterior part of the left side of the medulla presented the same appearance. The hæmorrhage extended also into the left crus cerebri and left crus cerebelli, and had burst through the floor into the fourth ventricle just anterior to the acoustic striæ on the left side. This hæmorrhage was confined entirely to the left side; it did not quite reach the median raphe of the pons, and, judging from the condition of the tissues, it probably began in the outer and anterior portion of the pons.

CASE II. TUMOR OF LEFT CEREBELLUM AND LEFT SIDE OF PONS; DEGENERATION OF LEFT SIXTH NUCLEUS; CONJUGATE DEVIATION TO RIGHT; PARESIS AND SPASM OF LEFT LIMBS.

Mr. R. B., aged sixty, was seen with Dr. Chase, of Dedham, June 9, 1882. He had always worked hard, and had occasionally had headaches till about eight years ago; from that time he had worked harder than ever. Three years ago he had trouble from overwork. The commencement of his illness was referred by the patient to three months before he was seen, but before that his wife noticed that he was less steady than formerly, that buttons requiring the use of the left hand were buttoned with greater difficulty. The patient first noticed that his legs were weak, and that he could not walk well; this difficulty in walking increased, but he was not laid up. He also found trouble in using his mind; having been very skillful in figures he was not able to perform the problems he desired to work out. His left side gave him the most trouble. He had been confined to bed only two or three weeks. He had had severe headaches, during which his head was drawn down towards the right shoulder, and his face was turned to the right; there had been dizziness, but no nausea. The left arm had been affected with tremor, and at times the whole body also.

When seen he was in bed, head turned to the right, and the eyes to the right; he could move both eyes to the left, but it was with a jerking motion, and not so far as normal. The left eye, following the finger with the right eye closed, moved towards the left very badly; the right eye, with the left closed, moved better than the left. The pupils were equal, reacted to light normally. The left lids moved less readily, and shut less tightly than the right. The left side of the face was slightly paralyzed; the tongue was protruded straight; the left arm was weak and not useful; when raised

above his head a tremor commenced when it was about on a level with the shoulder, and this increased as it was raised higher, and became of wider excursion till it resembled choreic motions. In ordinary positions there was scarcely if any tremor; the arm could not be used so readily as the right. Both legs moved fairly well without tremor. Cutaneous reflex was normal; tendon reflex could not be tried satisfactorily as he could be raised only for a very short time for ophthalmoscopic examination; the change of position caused very great vertigo, and could be maintained only a minute or so. Sensation was diminished on the left. The fundus of the eyes was normal. There had been no loss of consciousness. The symptoms came on gradually.

Autopsy. — Dr. Cutler made the autopsy and has furnished the following notes: There was atheroma of the arteries at the base, most marked on the right of the basilar, and there it seemed to encroach upon the calibre of that artery and to interfere with some of the smaller vessels arising therefrom. On both sides at the end of the carotid there was atheroma, most on the right, and extending on that side into the middle cerebral. The right posterior cerebral was nearly occluded, but a fine stream of water could be forced through it. There were many smaller patches of atheroma dotted over the vessels of the circle of Willis.

The two hemispheres were adherent along the longitudinal fissure; this was probably inflammatory. The pia mater was moderately full of blood; no thickening except along the longitudinal fissure. On section the puncta cruenta were well marked. There was nothing abnormal in the hemispheres.

A little anterior to the middle, the pons was slightly softened; a little lower the tissue became striated, alternate yellow and gray, was somewhat translucent, resembling in color œdematous connective tissue; this mass of abnormal tissue was irregularly oval, hard to the touch, and extended with a sinuous course into the left cerebellar lobe; the left corpus dentatum was obscured by it. In the pons the new growth extended nearly to the medulla, being confined to the left side.

One sixth nerve was atrophied.

The other organs were essentially healthy.

The specimen, as I received it from Dr. Cutler, had been some time in alcohol, and I was not willing to wait long enough to see whether it would harden well in Müller's fluid. The sections for microscopic study were not so continuous and satisfactory as could be wished; but the most important parts showed well. The tumor had no clearly defined edge towards the pons, yet it could be seen that the deep nucleus of the seventh nerve was not destroyed, but just external to that nucleus the seventh nerve passed through the tumor and must have suffered in its conducting power in that part of its tract; at least that would explain the facial paralysis on the left. Anterior to the nucleus of the seventh nerve the tumor apparently approached nearer to the median line.

A large proportion of the nucleus of the left sixth nerve was healthy. In one section through the middle of the nucleus there were many degenerated nerve cells, and the number of cells was evidently less than that on the right of the same section.

The diagnosis at the time the patient was examined was tumor in the basal ganglia or cortex on the right or in the pons on the left, possibly implicating the cerebellum. The latter was considered the more probable.

Besides the conjugate deviation of the eyes the peculiar irregular motion on raising the left arm is worthy of notice. It is also of interest that there was such extensive change of the cerebellum and of part of the pons, yet no retinitis was present. The vertigo might have been expected, as it is a common symptom in cerebellar tumor. The fact that the head was drawn towards the right shoulder during the severe attacks of headache is also of interest.

The symptoms in this case are peculiar, but seemingly are easily explained. The tumor, as shown on section, did not affect the great motor tract of the pons, the pyramidal fibres which run near the anterior border of the pons, hence we have no paralysis of the right side. The facial nerve runs through the tumor, and that nerve was partially paralyzed. The tumor was situated in the left middle cerebellar crus, and extended into the pons. The specimen had been long in alcohol when I received it, and it was cut so that exactly how much of the pons was affected I could not say with certainty. Brown-Séquard has shown that lesions in this vicinity may give rise to partial paralysis on the same side with the lesion; hence the weakness of the left limbs. The spasm developed in the left arm by raising it cannot be readily explained; it was very much like the phenomenon known as post-hemiplegic chorea. The conjugate deviation was away from the side of the lesion. But in this case the regular order of symptoms was broken, for there was weakness and spasm of the left side, that on which was the tumor, and the deviation was towards the opposite side. In this regard the case is anomalous.

(To be continued.)

THE ACTION OF QUININE UPON THE EAR.[1]

BY J. ORNE GREEN, M. D.

THE specific action of quinine upon the ear in producing tinnitus aurium is so well known that it is apt to be considered of no consequence, and its effects upon that most important organ, whether for good or evil, are in too many cases, it seems to me, neglected, while the attention of the physician is occupied in watching the action of the drug on the general disease for which it is administered. Many cases which have come under my observation have so thoroughly convinced me of the great injury often done by the drug, and these observations agree so well with the known pathological tendencies of the ear, and with the more recent physiological experiments on the action of quinine, that I desire to call attention to them. Works on materia medica, it is true, universally speak of the tinnitus aurium, but none with which I am acquainted seem to consider that the aural symptoms may be a contra-indication for the exhibit of the medicine in certain cases, and none give any cautions so far as the ears are concerned in regard to its use. Even so late an authority as Ringer, in his admirable Handbook of Therapeutics, contents himself by saying merely that it occasionally produces deafness, which usually passes off, but in rare cases remains for life.

Recent observations on the action of quinine show that its effect is to produce a pathological condition of the ear, which, if excessive or long continued, en-

[1] Read at a meeting of the Medical Improvement Society, February 26, 1883.

dangers the integrity of that organ; a pathological condition very similar to that produced in certain aural diseases, which are well known to seriously impair the functions of the ear, and that not by any occult and unknown principle, but by well-known laws of histological changes, which produce interferences with the established rules of physiology and physics.

It was formerly claimed that the action of quinine was the production of contraction of the blood-vessels, and consequently anæmia of the ear; this was early denied by Von Graefe, as contrary to his clinical experience, and any one who has watched the effects of quinine when given to a patient suffering from acute inflammation of the ear can satisfy himself in a very short time that the drug, if pushed to its specific effect, most decidedly increases the existing inflammation. I have myself watched many such cases, and consider the effect as undeniable. In 1874 Hammond [1] asserted that he thought the effects of the drug upon the ear were due to congestion, and in 1874 Roosa [2] also asserted the same thing, and gave the results of experiments performed by him upon three medical men, the result of the experiments being that the administration of the drug was followed in each case by a decided congestion of the blood-vessels, which run along the manubrium in the membrana tympani. In two of the cases there was very marked tinnitus aurium accompanying this congestion, while in the other case, that in which the congestion was the least, there was no tinnitus. The blood-vessels which were seen to be congested in these cases are known to be intimately connected with the vascular system of the middle ear; in fact, they form such an important part of this tympanic system that in the earlier stages of acute inflammation of the tympanic mucous membrane congestion of the vessels along the manubrium is one of the earliest diagnostic appearances. The blood-vessels of the tympanum are also in direct connection with the circulation within the labyrinth as has been proven by Politzer, by means of injections, and as is occasionally shown clinically by the marked tympanic congestion which accompanies inflammations of the labyrinth in cases of extension of disease from the brain to that cavity. From the very close relations of the vascular systems of these three parts, the membrana tympani, the tympanum, and the labyrinth, and from the appearance of congestion as the direct result of the administration of ten and fifteen grain doses of quinine in the carefully-conducted experiments of Roosa, we have strong evidence that the effect of the drug upon the ear is congestive rather than anæmic; but inasmuch as the amount of the congestion visible in the manubrial vessels was slight and disproportionate to the intensity of the tinnitus aurium, it seemed reasonable to conclude even from these few experiments that the congestion of the deeper cavities was greater than that seen on the periphery, so to speak, of the vascular system, and as the nervous structures within the labyrinth are the undoubted seat of subjective noises, it was probable that the labyrinth was the chief point of congestion.

Recent observations and experiments by Kirchner [3] confirm this view, and show that not only congestion but active inflammation and even hæmorrhage may be produced. These experiments were undertaken upon animals with both quinine and with preparations of salicylic acid, which are well known to produce clinically the same symptoms as quinine. Two gramme doses of sodium salicylate were given to rabbits, cats, and dogs; the number of repetitions of the dose is not stated. The rabbits lived usually about a week, and died with symptoms of great dyspnœa, and with paralysis of the posterior extremities. Dissections showed great hyperæmia of the osseous meatus, near the membrana tympani, with a vesicle containing reddish-yellow fluid, close to that membrane; the tympanic mucous membrane was dull, yellowish in color, and with numerous spots of ecchymoses, varying in size from 3 mm. to minute specks. In a number of cases opening of the labyrinth showed an intense redness on the inner surface of the stapes, and in the vestibule and the end, and periolymph was distinctly colored red. In some of the cases the ecchymoses of the tympanic mucous membrane were present only on one side, while the opposite tympanum showed enlarged and tortuous vessels.

Quinia muriate was given in doses of one to one and one half grammes. Dissections in these cases showed great congestion within the skull, the vessels of the dura and pia being very full, and of ten cases three showed with the enlarged vessels an ecchymosis in the lateral ventricle; similar conditions within the skull were also noted in cases of salicylate poisoning. With cats and dogs one to two grammes of quinia muriate were fatal in from five to eight hours, the animals showing pendulum movements of the head, increased flow of saliva, weakness or paralysis of the anterior extremities, somnolence, rapid breathing, paralysis of respiration, and death. The appearances of the ears on dissection were the same as those seen in the salicylate cases, hyperæmia and hæmorrhage of the tympanum and labyrinth. Precisely similar results were obtained from experiments on guinea-pigs and mice.

"From these observations," Kirchner says, "it is certainly evident that quinine and salicylic acid may produce changes in the important parts of the ear, which may not only injure but even wholly destroy the hearing. The involvement of the labyrinth in the hyperæmic condition could not exist for any length of time without serious injury to the ultimate nerve fibres of the acusticus. The clinical appearances of deafness produced by quinine point to the same thing; usually pain in the depth of the ear is complained of, as was also observed by Roosa, often intermittent, often very severe, and sometimes otitis externa is seen as a complication. In the examination of trustworthy persons who have declared that their deafness was due to large doses of quinine, I have repeatedly seen a marked opacity of the drum membrane, a condition which, as a rule, is to be regarded as the residuum of a chronic inflammatory process, and due to a thickening of the mucous membrane lining the inner side of the drum membrane. The symptoms in the labyrinth are also characteristic and point to an organic change in the ultimate fibres of the acusticus. Just as in syphilis so in quinine deafness we find diminution in the perception of a vibrating tuning-fork placed on the bones of the head, and a defective perception of the higher tones. In quinine deafness we are then dealing not alone with a simple irritation, a simple nervous excitation of the organ which will pass off without leaving injury, but with an inflammatory process and (possible) permanent pathological changes."

[1] Psychological and Medico-Legal Journal, October, 1874.
[2] American Journal of Medical Science, October, 1874.
[3] Berliner klinische Wochenschrift, No. 49, 1882.

Studies of the pathology of the ear by Toynbee (published 1841-1855), Von Troeltsch, Schwartze, Gruber, Wendt, and many others, all agree in the fact that the mucous membrane of the tympanum is especially liable to inflammation, and the changes found in that membrane, which are the causes of many forms of deafness, are histological changes of the mucous membrane, due to inflammation. The recent work by Politzer [1] gives more thoroughly and completely than has been done heretofore the microscopical changes which occur in the mucous membrane of the tympanum, not only in general, but in each particular part of the conducting mechanism. These observations show, in brief, that while all the structures composing the mucous membrane, epithelium, blood and lymph vessels, nerves and connective tissue, are changed in various ways in the different forms of inflammation, the connective tissue is the part in which the alterations producing permanent impairment of the functions of the conducting apparatus are most common. These changes consist in an infiltration of round cells, which becomes organized into new fibrous connective tissue by which the delicate and movable mucous membrane is converted into a hard, stiff, and adherent membrane, liable with time to a sort of cicatricial contraction, and producing immobility of the parts of the conducting apparatus covered with the affected mucous membrane. This connective tissue is subject also to still further alteration, such as calcification and ossification.

The pathology of the labyrinthine structures cannot be said to be established, the parts lie so deep, are so minute, delicate, and destructible that very few microscopists possess the ability to examine, and fewer still the inclination to devote the necessary time to, this branch of the subject. The extreme delicacy of the parts, however, and daily clinical experience in watching the effects of the common inflammations of the ear upon the nervous apparatus, as shown by the frequent loss or diminution of perception by bone conduction when there is every reason to think that the congestion from the tympanum has extended into the labyrinth, are sufficient to show us that a marked and long-continued congestion of the nervous apparatus is liable to produce serious injury.

The thickening of the mucous membrane observed by Kirchner in cases of quinine deafness is of importance as far as it goes, but too much stress should not be laid upon it, as such opacity may have resulted from some old inflammatory process, dating back even to childhood, as such are very common. It must be granted that no one yet has watched a membrana tympani normally translucent become gradually opaque as the result of quinine, but such a refinement of experimental pathology is scarcely to be expected.

The *rationale* of the action of quinine seems to be almost unknown. Of its effects upon the ear in producing congestion of the tympanum, labyrinth, and osseous meatus I have already spoken, and this congestion, it is fair to assume, is the cause of the well-known tinnitus aurium. Of other well recognized effects we have the frontal headache, with a sense of general fullness in the head, mental disturbance, flushing of the face, suffusion of the eyes, and, Ringer asserts, from large doses, an abolition of reflex action, before voluntary movement, due to stimulation of Setchenow's reflex inhibitory centre. In addition the last two years have developed a quinine amaurosis, serious in its effects on the eye, and still further complicating, rather than explaining, the problem of the action of the medicine. In the *Klinische Monatsblätter für Augenheilkunde*, 1881, Knapp calls attention to sixteen cases of quinine amaurosis, which had been published or which he had himself observed. From 150 to 180 grains taken accidentally at one dose, from nine grains taken every two hours up to seventy-five or ninety grains in the course of one or two days, and from smaller doses taken for from a few days to two weeks great pallor, general weakness, twitching of the mouth and extremities, together with total blindness and deafness, came on. In some of the cases total loss of consciousness for several days existed, and the blindness and deafness were noticed first on recovery from this state. The pupils were dilated and fixed; there was not even perception of light. Ophthalmoscopic examination showed in the most pronounced cases a total absence of blood in the optic nerve and retina. In all of the cases there was a decided paleness of the papillæ, and a narrowing of the retinal vessels, both veins and arteries. The total blindness may remain for weeks or months, but in none of the cases yet observed has it been permanent. The central acuteness of vision in most of the cases returned to normal, in the remainder it varied between $\frac{2}{30}$ and $\frac{2}{200}$. Light and color sense, at first much impaired, gradually became normal in the course of months. Lighter cases are reported by Knapp where, in addition to the more common general symptoms, there were clouding of the vision, diminished perception of color, and narrowing of the field of vision, with pale papillæ and contracted vessels. He has also seen the same symptoms from large doses of salicylic acid and sodium salicylate. From these observations it is evident that in the eye we have an exactly opposite condition from that as yet observed in the ear, anæmia of the retina and optic nerve instead of congestion.

From the observations on these two organs it seems evident that the effect of the drug is expended on the blood-vessels, and is probably due to action upon the vaso-motor nerve centres, although the question of the manner of this action would carry us into the realms of speculation beyond the scope of this paper.

The congestion produced in the tympanum and labyrinth fully explains the fact observed clinically that quinine may increase any existing inflammation of the tympanum. In any ear where there has been a change in the tissues such as has been described, where there is an increase in the tissue elements, and especially of the connective tissue, the result of some previous inflammation, any new congestion or inflammation produces a greater degree of deafness at the time, and is more liable to produce still further tissue changes than if the ear was in a normal state when the inflammation set in. This is due to the fact that the existing hyperplasia in the early stages of the inflammation is increased in volume by a serous infiltration, and in the later stages by an effusion of round cells which, becoming organized, add to the hyperplasia. In the acute secretory forms of tympanic inflammation any increase of the inflammation will of course add to the amount of secretion, and so intensify any previous symptoms. I have already called attention to the delicacy of the labyrinthine structures, and to the ease with which they are injured by inflammations, although the exact pathology has not been determined.

[1] Lehrbuch der Ohrenheilkunde, 1882.

In view of these facts and of the constantly recurring experience that patients refer their new aural symptoms or a decided and serious increase of old aural symptoms to a course of quinine, ought not the ears to be carefully considered in prescribing the drug, and especially in ordering large doses or pushing the medicine to its specific effect of tinnitus aurium? Ought not the existence of inflammation of the ears or of decided tissue changes due to previous inflammations be regarded as contra-indications to large and long-continued doses of quinine, only to be neglected in most urgent cases? It certainly seems to me that more attention should be given to its possible effect upon the ears than is often done.

Of the great value of the drug in an immense number of cases there can be no question; of its absolute necessity in many cases there is scarcely a doubt, but there still remain many instances in which, as I believe, the medicine is given in larger and more continued doses than is necessary for the slight ailments for which it is prescribed, and always with the risk to the ears. Again, there are many instances where the medicine is pushed to its specific effect from indifference or carelessness, where equally good results could be obtained by keeping within the danger line, the tinnitus aurium being the signal given by nature, at least in the majority of cases, of the congestion of the labyrinth. Finally, where large and continued doses are absolutely necessary, and where it is desirable to push the drug to its specific effect, might it not be possible to produce the desired result, and yet occasionally interrupt the administration for one, two, or three days, thus allowing the congestion of the ears to subside? Certainly a continuous congestion for a long time is more likely to result in a decided inflammation with exudation, either free or within the tissues, than an intermittent congestion.

Symptoms of acute inflammation of the ears are well known: earache, fullness, throbbing, often subjective noises, more or less deafness, etc. A few questions from the physician, even if the symptoms are not mentioned by the patient, will bring them to light. With old changes in the ears, the results of previous inflammations, the diagnosis is not so easy. The history of previous pain, severe and long continued, or an otorrhœa of some duration, even if years before, would make one suspect some tissue changes; an existing, although slight, subjective noise of any character, and any degree of deafness in either ear, would also point to the same conclusion. Certainly where any of these symptoms exist the physician should be upon his guard in prescribing quinine, and especially in giving it in large doses.

No fixed rules can be given for doses, for with this medicine, more than with many others, the idiosyncrasies of individuals to the action of the drug are most marked; while six grains in twenty-four hours produce slight tinnitus in one person, many times that amount produce no effect in another individual, and it would be interesting to know whether in the diseases in which very large doses are considered necessary, as, for instance, in severe malaria, the medicine is borne to a greater amount without tinnitus than in the same person when in a state of health.

To formulate the conclusions of this paper, we have, —

(1.) Clinical experience the world over is that quinine occasionally produces serious injury to the ears.

(2.) From our present knowledge, both clinical and experimental, we are justified in asserting that the action of quinine upon the ears is to produce congestion of the labyrinth and tympanum, and sometimes distinct inflammation with permanent tissue changes.

(3.) That the action of the drug upon the ears should always be considered in prescribing it, and changes in the ears, due to existing or previous inflammation of those organs, constitute a contra-indication to the medicine in large doses or for a long time except under urgent circumstances.

(4.) That where large and continuous doses are absolutely necessary an occasional intermission of the administration is desirable, if possible, to diminish the risks to the ears.

RECENT PROGRESS IN THE TREATMENT OF THORACIC DISEASES.[1]

BY F. I. KNIGHT, M. D.

THE CONTAGION OF PHTHISIS.

Dr. C. T. Williams read a timely paper on this subject at the last annual meeting of the British Medical Association.[2] He says that the discovery of the tubercle bacillus, by Koch, and the highly interesting series of experiments which led up to it, have naturally caused us to review phthisis in its various aspects, and especially in that which relates to contagion. How far consumption is infectious is a question which has been under discussion for centuries, and on which great difference of opinion has prevailed, and still prevails, in various countries, the north of Europe holding, as a rule, its non-contagiousness, and the south its contagiousness. The chief difficulty lies in the fact that many of the most potent agents of causation in phthisis, such as dampness of soil, bad ventilation, and deficient food, are also conditions which would promote the multiplication of low organisms; and, on the other hand, heredity, which is the source of a large amount of phthisis, cannot be reconciled in its action with the bacillus theory; for, if a man had strongly inherited phthisis in his tissues, are we to believe the bacilli have been transmitted in the seminal fluid of his father? How can we account for the cases where the parents having died of consumption the children are necessarily attacked, on arriving at a certain age, with a severe type of the disease? [This does not seem to us necessarily an argument against infection. The child may inherit not the germ, but such a condition as makes him, at a certain age, more liable than others to infection, that is, he offers a more favorable soil for the development of the germ. Rep.]

The microscope tells us that Koch's bacilli are present in phthisical sputum in fair abundance. Now, when we consider the number of consumptive people who, being under no restriction, go about coughing and expectorating freely in the streets and parks of London, and remember that this sputa abounds in bacilli, that it dries, and becoming dust is wafted about in the atmosphere, and doubtless inhaled by a large proportion of the population, we must admit that the bacilli, though ever present, are not very active in ill doing, and probably because the soil they enter is not always suitable.

The forms of contagion in phthisis which have been most discussed are the following: (1.) Infection

[1] Continued from page 197.

[2] British Medical Journal, September 30, 1882.

through breathing the same atmosphere, that is, infection by inhalation. (2.) Infection through marriage. (3.) Infection through the milk of diseased animals, or even of phthisical women.

With reference to the first form of infection, Dr. Williams publishes a continuation of the health statistics of the Brompton Hospital resident staff. It will be remembered that the late Dr. Cotton, in the year 1867, published a report of the health of the residents from 1846, the year in which the hospital was opened. The two together form a set of statistics extending over a period of thirty-six years, and relating to several hundreds of individuals subjected more or less to contact and association with consumptive patients for periods varying from three months upwards. The hospital commenced in 1846 with ninety beds, which, in 1856, were increased to 200. In 1873 a temporary utilization of the ordinary dwelling-houses, which stood on the site of the new building, raised the number of new beds to 240, which was maintained till 1879, when the temporary wing was closed. At present there are again about 240 beds in use, funds being as yet wanting to allow the whole number of 337 to be maintained.

The ventilation of the hospital is now carried on by extraction, by coils of steam pipes placed in towers in different parts of the building, the air being changed two or three times an hour. There is, in addition, extraction by the fire-places. Admission of air takes place at one wing at the level of the galleries and wards; in the other at the basement, the air being heated in winter before admission. Previous to the introduction of the extraction system, in 1877, the left wing was ventilated most imperfectly, and the impure state of the air showed itself in an outbreak of erysipelas and sore throat in 1869, and again in 1875. Since 1877 the extraction of foul air has been well performed, and as long as the proper difference of 10° F. between the shaft and the wards is maintained, all goes well; whenever, through accident or other causes, this extraction rate has been diminished, sore throat has appeared in some of the wards. Three fourths of the patients are cases of phthisis in various stages and forms; in many this disease is very advanced, accompanied by pyrexia or loose expectoration, or by both.

The rest of the patients are instances of other forms of chest-disease, such as pleurisy, empyema, bronchitis, chronic pneumonia, bronchiectasis, and emphysema, or else of diseases of the heart. The spittoons of the patients are changed two or three times a day; but until lately, unless the odor was unpleasant, no attempt was made to disinfect them.

It seemed to Dr. Williams that the above facts are instructive as bearing on the bacillus question. The deficiency in the ventilation must have led to a large accumulation in the wards of the products of respiration, and also of our friends the bacilli; we consequently ought to have seen an extension of the disease to non-consumptive cases or to the nurses; but nothing of the sort occurred, only the usual results of hospitalism, that is, erysipelas and sore throat.

The out-patient department was until last winter situated in the old hospital, and was quite insufficient properly to accommodate the large numbers of out-patients attending. The ventilation was exceedingly bad, and communication with the dispensary being made by windows, the air of that department was rendered more impure. The attendance of two to three hundred out-patients daily, of whom a large proportion were consumptive, must, on the theory of infection, have proved a considerable source of danger to assistant physicians, to the clerk who enters their names, and to the porters who marshal them and keep order.

There have been four *Resident Medical Officers*. All are alive, and tolerably well. Mr. Edwards held the post for twenty-five years without any symptom of lung disease, and still enjoys good health. Of the others, two showed at some time of their residence signs of hospitalism, but none of definite consumption.

Clinical Assistants. — These are senior students or qualified medical men who reside in the hospital for six months, and are engaged in the treatment of patients and the recording of cases. They also assist the pathologist in making the post-mortem examinations. About 150 have held office since the opening of the hospital; of fifty-nine Mr. Edwards reported, in 1867, that three had become consumptive, and of these fifty-nine one more has since contracted the disease. Mr. Edwards states that all were free from phthisical disease during their residence in the hospital. Of the sixteen before Mr. Edwards's time one who had strong family predisposition died of phthisis. Of the seventy-five who have held office since 1867, Dr. Williams has traced all but three. Of these seventy-two one has died from other causes than phthisis; two have died of consumption, one case having had hæmoptysis previous to residence, and in the other the disease came on one if not two years after residence, the gentleman being quite well during his term of service. Another, who was overworked, became consumptive while in the hospital, but has since entirely recovered. The remaining sixty-nine are all well. Therefore, of the 150 eight became consumptive at some time or another of their lives, and five died; but in only one instance was it clearly proved that the disease was contracted in the hospital.

Matrons and Lady Superintendents. — Of these there have been six, none of whom suffered from consumption. One lady held this post twenty-four years. All are alive except one, who died at an advanced age.

Nurses and Servants. — The head nurses or sisters sleep in rooms communicating with the wards through the galleries, and during the day their duties bring them constantly into contact with the patients. The assistant nurses sleep in bedrooms above the wards, but practically live in the galleries and wards, being engaged either in day or night nursing.

Among the nurses, up to 1867, Mr. Edwards reported one death from apoplexy, and one from phthisis, the disease being in this case contracted under conditions of great poverty after she had left the hospital. Since his report some of these nurses have died — one of cancer at fifty-two; one of chronic pneumonia preceded by erysipelas, chronic rheumatic arthritis, and enlarged cervical glands. Three have died of phthisis after leaving the hospital, two of whom were quite free from chest symptoms while resident, and were not attacked till many years later. In one case the disease seems to have commenced while she was a nurse; this is the only one in which consumptive disease came on in the hospital among the nurses, and this in a period of thirty-six years. Since 1867 there have been 101 nurses, three of whom have died, one was drowned at sea, one died of poisoning, and one of phthisis after leaving the hospital, but there is no evidence of her having contracted it there.

There is a small institution called the "Home" in

connection with the hospital, where male patients wait their turn for admission. It is an ordinary dwelling-house of ten rooms, with no arrangements for artificial ventilation, and often contains twelve to fourteen inmates. It has been open about twenty years, and during this period there have been four matrons, all of whom have enjoyed good health. Of the thirty-two gallery-maids, scrubbers, who have served since 1867, many cannot be traced, but no death has been ascertained, and certainly no case of phthisis occurred among them while in the hospital.

House Porters. — Of these there have been twenty, including the gate and out-patient porters. Their duties in the waiting-rooms expose them to the breath of the out-patients. None, as far as known, have died of phthisis.

The following are non-residents: —

Physicians and Assistant Physicians. — There have been twenty-nine, of whom eight have died, but only one from phthisis. The duties of the assistant physicians keep them for many hours at a time in close contact with a large number of consumptive patients, and it is difficult to see how they can avoid, in the course of a careful examination of the chest, inhaling a certain amount of the patient's breath.

Dispensers. — Of these there have been about twenty-two; seven have died. One committed suicide, one died of liver disease, two of pneumonia, three of phthisis; of these last one became intemperate, left the hospital, and, being in wretched circumstances, died of consumption two years after leaving. A second left the hospital well after two years' residence, but after going into business contracted phthisis and died. In the third the lung disease appeared during the three years he was at the hospital. One dispenser, who held office for two years, and afterwards went into business on his own account, was admitted for phthisis twenty-five years later, and is still living. There were also two dispensers who showed distinct signs of consumptive disease, but entirely recovered, and are now in good health. These dispensers have no duties in the wards, but, as before mentioned, the over-crowded out-patient in the old hospital communicated with the dispensary by two windows, and the air of this department, already insufficient, was thus further vitiated.

Chaplains. — Of these there have been four. One died of heart disease, two at tolerably advanced age, not of lung disease. The present chaplain has been there eight years, and enjoys excellent health. He has no other duties than in the hospital.

Secretary and Clerks. — Of these there have been nine, of whom three have been threatened with lung disease, but have recovered.

A consideration of the above statistics, furnished by the largest institution for the treatment of consumption in the world, will lead us, as Dr. Cotton says, to hesitate before classing phthisis among the infectious diseases in the ordinary sense, for such an amount of phthisis might be found in any large institution not specially devoted to consumption; nay, more, in any large mass of town population.

NITRO-GLYCERINE IN ANGINA PECTORIS.

A valuable addition to our resources as therapeutists seems to have been made by Dr. Murrell. Many of our readers are familiar with the cases of angina pectoris treated by nitro-glycerine reported by Dr. Murrell in the *London Lancet* in 1879. Dr. Murrell now gives us the results of his more extended experience in a little brochure.[1] The symptoms following a dose of two drops of a one per cent. solution are slight flushing of the face, decrease in the fullness of the arteries, and a rise in the pulse rate. One of the most uncomfortable symptoms is the feeling of pulsation in the head. Sphygmographic tracings are given showing the effect of the drug on the pulse. The tracings as well as the symptoms are similar to those produced by the nitrite of amyl. Both drugs produce a marked state of dicrotism, and both accelerate the rapidity of the heart's action. The nitro-glycerine produces its effects much more slowly than the amyl nitrite, and they last longer. Some interesting observations were made during the administration of nitro-glycerine to a patient with epispadias, showing a greatly increased flow of urine.

Dr. Murrell has given nitro-glycerine in many cases of angina pectoris with marked success. Details of a dozen cases are given.

From a study of his cases Dr. Murrell draws the following conclusions: —

Mode of Administration. — The author generally uses a one per cent. alcoholic solution, one minim being equal to one hundredth of a grain of pure nitro-glycerine. It may be given in a teaspoonful or more of water. In some cases he has given it with a few drops of spirits of chloroform in peppermint water, an advantageous mode of administration when anything cold excites or intensifies the paroxysm. It also relieves the flatulence which often accompanies the attack.

The Dose. — On this point it is impossible to lay down any definite rule. One patient could take over one hundred minims of the one per cent. solution at a dose, whilst another suffered severely from half a minim. As a rule one minim is a safe dose to begin with, but it is better to begin with half a minim. Murrell says he nearly lost a patient by giving him two minims for the first dose. Although it is a good plan to begin with a small dose, there is no reason why it should not be increased rapidly. If half a minim produces no effect, give a minim at once, and go on increasing the dose till the patient complains. It must be remembered that the object is not to give a certain dose, but to get the physiological effect of the drug. After a time tolerance is established and the patient is able to take more than at first. An overdose might produce alarming symptoms, but the effects are commonly transitory, and the patient recovers before assistance can be obtained.

Frequency of Administration. — Murrell generally gives a dose every three hours, with an extra dose immediately at the onset of an attack. The patient should always carry the medicine with him. It should be remembered that when the attacks are severe, it may be necessary to give dose after dose in quick succession until relief is obtained. The full physiological action on the pulse as shown by the sphygmographic tracings occurred six or seven minutes after the dose.

Safety of Nitro-Glycerine. — The one per cent. solution is perfectly safe, and may be used without fear.

— At a large antivivisection meeting recently held at Manchester, England, three resolutions successively proposed by the originators of the movement were voted down, owing to the effect of a temperate speech on the aims of physiologists by Professor Gamgee, who was present.

[1] George S. Davis, Medical Publisher, Detroit, Mich., 1882.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

FEBRUARY 12, 1883. DR. CHARLES D. HOMANS presided.

DR. S. G. WEBBER read a paper on

OCULAR SYMPTOMS AS LOCALIZING SYMPTOMS.[1]

DR. H. W. WILLIAMS said that it is extremely interesting to read cases followed up so thoroughly, this not being usually the case, and to see the use that had been made of the ocular symptoms, not ophthalmoscopic, the movement of the ball and pupil, not the symptoms of the fundus as seen in other lesions.

DR. J. J. PUTNAM called attention to the rising temperature in all these cases. He asked how Dr. Webber explains the headache, whether from hæmorrhage, occlusion of vessels and anæmia, or otherwise.

DR. WEBBER said that it came from intermittent blood supply or from pressure on the meninges, which are well supplied with nerves. He supposes there is such a thing as anæmic headache. The blood-vessels were not occluded in any of these cases where headache existed. That symptom was most marked in the case of tumor.

DR. WADSWORTH asked whether conjugate deviation of the eyes, lasting only for a short time, and entirely disappearing, had been observed.

DR. WEBBER did not remember any case where the conjugate deviation disappeared, the paralysis of the limbs persisting. In the third case reported both paralysis of the limbs and conjugate deviation were temporary, and recurred several times.

FEBRUARY 26, 1883. DR. CHARLES D. HOMANS presided.

DR. J. ORNE GREEN read a paper on

THE ACTION OF QUININE UPON THE EAR.[2]

Dr. Green said that attention had been called to the same subject by the paper of Roosa, and that he was happy to indorse it.

DR. FIFIELD thought the paper of Dr. Green most timely. He had noticed with astonishment and alarm the enormous doses of quinine and salicylic acid ordered by young men fresh from the schools. They seem to have been taught that high temperatures are to be fought in the most determined way, forgetful of the fact that temperature and pulse are by no means the essential factors of disease, and although one may be lowered, and the other lessened in frequency, yet the fatal result is not stayed. St. John Roosa, in his recent paper upon quinine, had made this point, and it had been well made. Dr. Fifield thought the reintroduction of the thermometer had been by no means an unmixed blessing. High temperatures alarmed us sometimes unnecessarily, when if we had not known them we should have thought the patient going on well. He alluded to the former great sage for reducing the rate of the pulse by veratrum viride, when physicians claimed to jugulate pneumonia by its use, as they now talk of doing the same thing by quinine and salicylic acid. Norwood's tincture was the great god of medical idolatry. Who prescribes it now?

Dr. Fifield related the following case of a young man ill with erysipelas of one arm: The pulse was about 120, temperature 104.4° F. At four P. M. the administration of salicylate of sodium was begun, ten grains every two hours. Orders were given to take temperature by rectum every two hours, and when the temperature should fall to the neighborhood of 100° F. to stop medicine. The following morning at four o'clock it had fallen to 99° F. Medicine suspended; pain relieved. The same day at noon temperature began to rise, and by four P. M. had reached its old standard, 104° F. Salicylate of sodium in same doses resumed; same orders. At four A. M. temperature again fell to nearly normal. Medicine suspended; pulse about 84. At ten o'clock that morning, whilst eating breakfast, the nurse noticed that although he continued to eat, yet he ate more and more slowly, answered questions more and more slowly, and seemed falling asleep, or becoming more and more unconscious. She then saw that the finger-nails had turned blue, then that the pulse had ceased. Mustard and hot water over the præcordium, stimulants internally, with hot bottles to feet, etc., revived him, and the temperature rapidly shot up to its old point of 104° F.; pulse 120. All medicines having been suspended the temperature remained at the point mentioned until four A. M., when it fell rapidly to 99° F., remaining so for the next twenty-four hours; pulse at 80. The next day, in the afternoon, temperature rose to 104° F.; fell after midnight to normal, and thenceforth never rose again. Convalescence now became complete.

The fullest and most satisfactory account of salicylic acid in its action on the animal is contained in H. C. Wood, Jr.'s Treatise on Therapeutics. In this we are told it manifests its presence in the system by symptoms closely resembling cinchonism. In large doses there is distress in the head, a positive headache, deafness, amblyopia, excessive sweating. According to Reiss decided fall of temperature without alteration of the pulse also occurs. The action upon the system of the acid and its sodium salts appear to be identical, ptosis, deafness, strabismus, mydriasis, disturbance of respiration, excessive restlessness, passing into delirium, slow, laboring pulse, olive-green urine. In some cases the temperature has remained normal, in others it has approached collapse. One fatal case is recorded in the *Virginia Medical Monthly*, June, 1877. Forty-eight grains of acid were taken in four hours. The symptoms were violent vomiting, headache, stertorous breathing, total unconsciousness. Death occurred forty hours after the first dose. A strong tendency to sleep is mentioned.

Temperature in normal men and animals seems to be unaffected by even large doses of salicylic acid.

Dr. Wood says of the drug: "The well-known physiological action of salicylic acid would only lead to one use of it in internal medicine, namely, as an antipyretic. The question as to whether good is achieved in fevers by its administration is of course entirely separate from its power of reducing temperature. It is certainly possible for a drug to lower fever heat, and yet to do far more harm than good, and the evidence at hand is insufficient to answer the inquiry." The case cited shows how easy it is to become the victim of a fallacy. Roosa, in his paper, points out that the

[1] Vide page 217 of this number of the JOURNAL.
[2] Vide page 220 of this number of the JOURNAL.

most brilliant examples of reduction of temperature by large doses of quinine have been followed by death just when, judging by the thermometer, they should have got well.

Dr. H. W. Williams said that it seems an enigma that the ear should be congested while the eye is anæmic. He supposes malaria may have some effect in altering the conditions. The state of the optic disk may depend in part on the general condition. He has seen this blindness only after long courses of large doses, mostly from the West. There has been slow recovery.

Dr. Lyman thought the paper a very timely one in view of the large doses of quinia and the salicylates now so very commonly given. He could not agree with the views of Dr. Fifield as to the little importance of high temperatures in disease. The use of large doses constantly repeated was, in his opinion, very objectionable, but in acute disease he felt quite sure of the beneficial results of one large dose, say ten or fifteen grains of quinia, when the temperature was high, given daily and repeated if necessary for several days. Had rarely if ever seen it followed by tinnitus, more often by nausea. If there was any tendency to cerebral congestion, he was in the habit of combining it with bromide of potash. In hospital cases, such as typhoid or pneumonia, as the remedy is only used at the height of the disease, the patient usually remains long enough during convalescence to show the evil effects of the remedy upon sight and hearing should such occur. He had never as yet seen such effects. He was not much in the habit of using quinine as a tonic, finding other things more beneficial. He had, however, seen more disturbance from its use in small doses long repeated than from the occasional use of large doses.

Dr. Hodges said that much of his knowledge of quinine was derived from observation of its effects when self-prescribed by patients, especially for the cure of "colds." By their own admission this was with an almost invariable result of aggravating the headache and coryza, and adding to the general irritation, without affording any compensatory benefit.

The temporary suppression of neuralgic pain which, with many failures, occasionally follows the administration of quinine, suggested the question whether similar relief might not have been obtained as promptly, and more agreeably and safely, by the use of some other drug. The equally transient, and perhaps unavailing, fall of temperature which succeeds the giving of large doses of quinine attracts attention and fixes itself in the memory; and yet the numberless times when the drug fails to produce this result are probably more familiar to physicians than the successes.

Apart from its use in intermittent fever, of which the speaker had no experience, the exhibition of quinine, so far as his observation had enabled him to judge, was attended by no beneficial or well-established effects whatsoever, other than its toxic ones, but by a great many discomforts, as well as by the dangers to which the paper of Dr. Green had called attention.

Dr. F. W. Draper remarked that the very valuable and instructive observations set forth in the paper would, he believed, possess much additional significance if they were supported by data from the reader's clinical experience as an aural surgeon showing a real increase in the number of cases of permanent deafness, attributable to the use of quinia, and occurring coincidently with the recently developed medical fashion of using large and sometimes intemperate doses of that drug. He agreed with Dr. Lyman in defending quinia as a therapeutic agent of great value, and he had never seen or heard of a case in which permanent injury to the hearing was directly traceable to its use.

Dr. Green said that he does not get an increased number of cases in which he is certain that quinine is the cause. He thinks that patients are less inclined to complain of deafness during convalescence, and later we do not always get the history.

Dr. C. J. Blake thought the paper timely and important. He then referred to the possibility of mistaking the effect of typhoid upon the middle ear for the effect of quinine.

Dr. Edes said that years ago he had been familiar with moderate quinine deafness in patients and to some extent in his own person, and had taken much interest in the question of permanent deafness, which he had been led to believe a rare though perfectly well recognized accident.

Facts of this kind, as well as of amaurosis, are reported in the elaborate work of Briquet, 1855, all occurring after large and usually continued doses. Dr. Edes had inquired some years ago of several aurists, among others of the reader, and could get no account of more than one or two suspected cases. A friend, who as a naval surgeon had had occasion to use the drug in considerable quantities, and who after the war devoted himself to aural practice, was so kind as to make an inquiry for such cases in the New York Ophthalmological Society, and elicited the opinion from several members, some of whom had had large hospital experience with malarial cases where quinine had been used very freely, that this drug was rarely if ever a cause of permanent deafness. Briquet mentions several physicians using large doses who do not report cases of permanent deafness, and speaks of Maillot, who used quinine in large doses in more than six thousand cases, as stating that the deafness always disappears at the end of a few days. He himself makes the same observation.

Dr. Edes wished to call attention to the size of the doses administered to the animals mentioned in Dr. Green's paper as presenting inflammatory aural lesions. If a cat weighs five pounds and a man one hundred and fifty, a dose of one gramme or one gramme and a half to the former animal would be equivalent, according to their relative weights, to thirty or forty-five grammes, or one ounce to an ounce and a half of quinine to a man.

Briquet remarks that "when one is obliged to carry the sulphate of quinine beyond two grammes it is always well to assure one's self of the previous condition of the eyes." Dr. Green's paper shows that the same warning may be applied, perhaps more forcibly, to the ear.

Dr. J. J. Putnam said that relief of aural vertigo and increase of deafness have gone hand in hand, seeming to show that quinine affects nutrition in these cases. It is an interesting pathological question if pure congestion, unless long continued, can produce tissue changes. Quinine affects the white blood corpuscles beside causing congestion. While caution is desirable it should be said that we do get failure from too small doses in cases that yield to large ones.

Dr. Baker had very often given thirty to thirty-six grains daily for many days. His cases were of a class that remain under observation a long time and

often return, but he knew of no bad effects. He had seen deafness and blindness from thirty-eight grains in an hour, but it passed off in a few days.

DR. GREEN said his paper was meant merely as a caution against the abuse of the drug. Most of the cases get well, but some do not.

DR. FIFIELD spoke of a recent discussion at the London Pathological Society on

ACUTE DILATATION OF THE STOMACH OCCURRING IN SURGICAL CASES.

He had himself had a case of an opened knee-joint, with burrowing of pus, the result of accident. The case had been at first mismanaged by an irregular, but seemed otherwise well, until vomiting began suddenly. The patient continued to vomit green watery matter for three days, when he died.

Post mortem by Dr. Gannett. Stomach greatly distended, reaching almost to the pubes. Contents in part gas, and also a litre of a greenish, stringy, thick fluid. Walls very thin; mucous membrane opaque and covered with an abundant layer of thick, tough mucus. Pylorus admitted four fingers easily. Duodenum and upper part of jejunum considerably distended above normal; remaining portion of intestine constricted and empty. Mucous membrane of intestine not unusual. There is no history of dyspepsia, and there was no disease of kidney, but the man was very nervous and anxious.

DR. MINOT reported a case of a woman, single, thirty-two. Two years ago pain in epigastrium after food, often for several hours. About the same time diarrhœa, lasting up to Christmas, 1882. Vomiting for a year past, at first at long intervals, of late every three or four days. Some swelling of feet and legs, which disappeared, but returned markedly in the last three weeks. Three months ago pain in left side just below nipple. Afterwards darting pain in lower abdomen at intervals. Scar in lumbar region as of a cut and sutures.

Operation denied by family; abundant growth of hair in vicinity of cicatrix. Thirty-six hours before death severe pain in lower abdomen, followed by great tympanites.

DR. FITZ stated that death was the result of acute peritonitis, due to a perforating, apparently tuberculous ulcer of the cæcum, and showed the diseased portion of the intestine, which was particularly interesting from the evidence it presented of the tendency towards and the possibility of a complete healing with cicatrization of tuberculous ulcers of the intestine.

There were several ulcers of the lower third of the ileum, both girdling and rounded, the latter opposite the mesenteric attachment. All were deeply pigmented, extremely puckered and indurated, and were partly covered with irregular patches of mucous membrane. Neither in the bases nor edges were appearances seen suggestive of tubercles. Six annular stenoses, the smallest less than a quarter of an inch in diameter, were present in the vicinity of the ulcers. The intestine above these was dilated, its walls were hypertrophied, and the mucous membrane was speckled from pigmentation.

Over the constricted portions of the intestine the mucous membrane, for the most part, was entire.

The cæcum was contracted from the presence of an extensive, chronic, pigmented ulcer, traversed by bridges of tissue. A small perforation through the edge of the ileo-cæcal valve established a second opening between the cæcum and ileum. A pin-hole opening through the cæcum at the outer and posterior portion was covered externally with a layer of fibrine uniting the cæcum to the abdominal wall behind.

At the junction of the ascending with the transverse colon was a large trabeculated ulcer with occasional gray and cheesy specks apparent in sections through the base. The lumbar and several of the mesenteric lymph glands were enlarged and cheesy. No evidence of tubercles was found elsewhere than in the ulcer of the colon and the abdominal lymph glands. The femoral and iliac veins were completely obstructed by thrombi, which were continued into the inferior vena cava as far as the renal veins. The linear cutaneous scar in the lumbar region was not connected with any apparent deep-seated lesion.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, RECORDER.

THE MORPHOLOGY OF PULMONARY PHTHISIS.

BY DR. EDWARD T. BRUEN.

I have been requested by the committee of arrangement to present some considerations bearing upon the pathological anatomy of phthisis, as the basis of a discussion of the subject before the Society. The ætiology of phthisis is very properly exciting careful attention at present; but the subject is in a far too unsettled condition to permit even a useful discussion. I shall not therefore allude to it, and I feel that I must offer an apology for the triteness of the subject-matter of my paper; but I was informed that it was designed to have a series of discussions upon *familiar* pathological conditions. With this understanding my scruples have been overcome. A consideration of special interest seems to me to be connected with the morphology of primary tubercle. In certain individuals, owing to inherited tendency, or particularly unfavorable surroundings, recovery after bronchitis due to cold is retarded, or a susceptibility to a new bronchitis is increased. In either case lingering catarrh in the majority of instances is the inception of the series of pathological processes known as phthisis pulmonalis. Two macroscopical appearances, nearly identical, occur, but they differ materially in their microscopic anatomy. Certain so-called miliary tubercles are frequently composed only of the inflammatory products of connective tissue, without the characteristic true tubercular arrangement. The word miliary expresses their appearances, but the inflammatory products may be so arranged as to represent true tubercle, pseudo-tubercle, or a diffuse inflammation. This tubercle or pseudo-tubercle is constant in the different forms of phthisis in the adult, except in the instance of pure interstitial pneumonia. Frequently the amount of tubercle tissue in the lungs is so great as to form the principal part of the process, although complicating inflammatory cheesy products are also present.

Classification of Phthisis. — The term tubercular peri-bronchitis is probably the best for the earliest stage of phthisis, and sometimes is the best to designate the process all the way through. The appearance of the peri-bronchial tissues resembles berries on a stalk. The formation extends along the bronchi, spreading from acinus to acinus until the trunk is reached, and is also distributed in the sheaths of vessels and lymphatics. True tubercle may penetrate a bronchus and involve the lining membrane, and a true

tuberculous ulcer may form the basis of an extensive associated bronchitis. Aside from this these infiltrations excite inter-lobular connective tissue growth, and subsequently the walls of the vesicles become thickened, and some vesicular catarrh ensues which may occlude a lobule. Thus the three divisions of the pulmonary tissue share in the pathological process of early phthisis. The cause of more than nineteen twentieths of vesicular consolidation is the result of a process of desquamative pneumonia. This term is used to describe the diffuse inflammation which may accompany the former processes, and which, more than the other changes, paves the way for the disintegration of the lung. In this process the peripheral epithelial cells of the bronchi are proliferated and shed, thus filling the bronchi and infundibula, while the surrounding connective tissue becomes infiltrated with cells. In children this process is a common one on account of the greater cellular activity in these subjects. In the desquamative catarrhal pneumonias of early life the process differs from the desquamative pneumonias of adults in that the air cells only are filled, and there is little or no change in the intervesicular tissue. Hence it is that recovery is so much more frequent in children than in adults. This process of desquamative catarrh is the basis of those cases of acutely developed phthisis which follow croupous or catarrhal pneumonia, and which has been called acute catarrhal phthisis or galloping consumption — sometimes pneumonic phthisis. When the pathological process just described is less rapid, the result which follows has been classed by some as acute caseous pneumonia. When the changes are still more slowly developed, it is synonymous with the chronic catarrhal pneumonia. The relative development, then, of these processes known as phthisis in the three divisions of the pulmonary tissues, the bronchial, the inter-lobular, and the vesicular, is dominated by the activity of the inflammatory process. Peri-bronchitis with consecutive changes in the latent forms, desquamative pneumonia in the more acute forms. While a process presently to be alluded to — interstitial phthisis — occurs as a very slowly developed change. In many of these cases when the destruction of the lung is very rapid the tubercular deposition, true or pseudo, occurs in early stages, but is masked in the later by the development of the secondary inflammatory desquamative pneumonic processes.

The situation at which phthisis is developed is probably most frequently the apex. The forces of expiration presumably are least efficient at this site, and the lungs are less entirely freed from mucus. The circulation also is less than at the roots, and the products of inflammation are therefore more dry. The roots of the lungs, however, in a large minority of cases, are primarily affected. This is especially true of cases in which the original processes of invasion are latent. I pause here to observe a clinical point of some interest, namely, that when the area of lung involved in the process of phthisis is distinctly limited, and does not shade off gradually into healthy lung, my opinion is that a favorable result may be very possible. Certainly I have seen the process of phthisis arrested even when it had passed into the stage of cavity when the lesions were sharply defined. The localization of a lesion, other things being equal, is a point of favorable prognosis. Another topic of interest is the share taken by pleurisy in the development of phthisis.

A specimen already exhibited before the Society is again shown to-night. It is taken from a colored man, seventy years old, with a family history free from the taint of pulmonary disease. He was tapped five times for the relief of hydro-thorax due to heart failure. Each paracentesis was followed by an exacerbation of pleurisy. Nine months after the first operation death occurred from an increase of hydro-thorax. The autopsy disclosed general miliary tuberculosis of the pleura and secondary deposits in the viscera. Throughout the parenchyma of the lung, adjacent to the pleura, there was copious deposit of tubercle, but the other parts of the lungs were normal.

Another specimen exhibits the same tendency, namely, general pleurisy, with phthisis and cheesy deposit in the pulmonary parenchyma, with cavities. The deposits are most abundant near the pleural surface of the lung, the deeper parts evidencing a more recent date formation.

These specimens show that pleurisy may give origin to a tuberculous inflammation. But while this is true it is conceded by all that dry pleurisy is a frequent secondary lesion in progress of pulmonary tuberculosis. Pleurisy is, however, in many cases very conservative, since by the thickening and adhesion of the pleural surfaces, the ulceration of the walls of superficial cavities is arrested and pneumothorax is prevented.

Interstitial Phthisis or Cirrhosis is a process in which true or pseudo-tubercle may or may not be associated. The pulmonary tissues are traversed by narrow bands of connective tissue which may gradually compress it more and more, finally converting it into dense fibrous masses. The color of the lung is apt to be slaty and dark. However, in some cases of interstitial phthisis patches of the peri-bronchial and desquamative pneumonia may be found with cheesy degeneration. Interstitial formation is an important part of the process by which cavities are inclosed and sometimes cicatrized.

Distribution: interstitial phthisis, if consecutive to bronchitis, is usually bilateral, affecting the upper lobes, although as a unilateral affection it is not infrequent.

Syphilitic Phthisis. — It is of interest to notice in this connection, that the early lesions of syphilitic phthisis, so called, are evoked very often by bronchial catarrhal inflammation, which predisposes to structural changes. In these cases there is a principal interstitial fibro-nuclear growth, commencing in the alveolar wall and concentrically arranged around the smallest bronchi and pulmonary vessels. Wagner maintains that the alveolar wall is implicated as commonly in syphilis as in ordinary phthisis. Bronchial narrowing occurs in these cases by the pressure of the new growth which develops along their lumen. Bronchial occlusion may occur from this new formation, but it is also caused by the enlarged bronchial glands, one of the effects of syphilis. By this means serious mischief in the lungs may be developed. In kind proportioned to the degrees of obstruction, such as atelectasis, emphysema, and certain forms of pneumonia, Green and Virchow suggest that the origin of syphilitic diseases of the lung is distinctive in this respect; that while in ordinary phthisis the fibroid is secondary or co-equal in its development with changes in the alveoli and alveolar wall, in syphilis there are primarily principal interstitial changes. Later, when entire vesicular consolidation and breaking down occurs, the process is similar to ordinary phthisis, and indistinguishable from it. The

vascularity of the new growth of connective tissue is also claimed to be a distinctive characteristic of the inflammatory proliferation due to syphilis. But we must remember in any discussion of early syphilitic lung disease that the one special and characteristic lesion of syphilis is the change in the intima of the blood-vessels. This has not yet been demonstrated in the lung, but merely general thickening of the external coat of the vessels. In the effect of interstitial processes upon the bronchial tubes the syphilitic differs from the non-specific diseases. The tough, contracting, fibrous, tissue which radiates through the lung draws together the bronchial tubes and deforms by narrowing or flattening them, possibly even to obliteration. On the contrary, in the forms of non-syphilitic fibroid phthisis the bronchial tubes are widened. The process proceeds in syphilis from the hilus into the interior of the lung, following the tract of the bronchial radicals and the bronchial arteries. The lesions also occur on the surface, near the visceral pleura, where there is also more connective tissue. Gummata occur as a later process. Time will not allow me to allude to these as I should like. A demonstration of the pathology of phthisis would be incomplete without concluding some cases of true miliary tuberculosis. This process may be primary in the lungs or secondary as a part of the general infiltration of the serous and mucous membranes, the lymphatic glands, and the viscera. This form of tubercle is characteristically recognizable only in the miliary stage. Its appearance as a number of small, hard, translucent nodules is too familiar to need description. A specimen upon the table illustrates an extensive lymphangitis of the pulmonary pleura forming a net-work over the pleura. The process microscopically shows adenoid tissue in nodular form. Similar cases have been described before the London Pathological Society in 1880.

Enlargement of the Bronchial Glands. — Another important part of the phthisical process is the enlargement of the bronchial glands. They present a firm pigmented character, and the connective tissue is usually infiltrated. I have observed in many cases in individuals suffering from temporary catarrhal conditions of the bronchial mucous membrane, especially when there is a family history of inherited phthisis, but particularly in distinctly scrofulous persons, a set of symptoms referable to enlargement of these glands. These symptoms consist chiefly in an alteration in the rhythm of the breathing, presumably from pneumogastric irritation is apparent inability to fill the chest with air, and a sense of suffocation is complained of. Added to these these is *pain* in the back to the right or left of the second dorsal vertebræ. Further detail of the clinical ensemble would carry one away from the pathology of the subject. When the enlargement of the bronchial glands is excessive it may occasion severe mediastinal pressure and pain becomes an important clinical symptom, and is of the sort occasioned by mediastinal growth generally. To detect this enlargement during life Guineau de Mussy has suggested percussion over the spinous processes of the cervical vertebræ in the course of the trachea. Following this line in healthy subjects a distinct tubular sound is elicited by percussion down to the point of bifurcation of the trachea at the level of it. Opposite the fifth and downwards we get the lower pitched and pulmonary resonance. When the tracheal or bronchial glands are enlarged the tubular sound over the upper dorsal vertebræ is replaced by dullness, which may contrast sharply above with the tracheal and below with the vesicular resonance. The result of bronchial pressure upon the pulmonary tissues is best marked when the processes of phthisis are not too extensive, also in interstitial phthisis, or in cases where there is marked bronchitic complication. In these cases the lumen of the bronchi are seriously diminished, and vesicular air supply is interfered with. Consequently emphysema with or without asthma atelectasis or a very intractable bronchitis may occur.

I will not describe the morbid process of phthisis in detail. The involvement of an entire lung is simply the filling up of the parenchyma with peribronchial product, or with the results of the desquamative pneumonic or interstitial process. And as one or the other of these predominate, so do we have peribronchial, fibroid, or catarrhal phthisis.

Another interesting although not demonstrable incident in the pathology of phthisis is hæmorrhage. Bleeding from the lungs occurs both early and late in the history of cases. The late hæmorrhage is easy to explain, being nearly always due to ulceration of the blood-vessel walls. The cause of early hæmorrhage is less simple; it is possible that in cases of phthisis there may be malnutrition or fatty degeneration of the blood-vessel walls, rendering rupture under conditions of increased arterial tension in the lungs an easy circumstance. It may also be the result of tubercular infiltration of the muscular walls which is followed by rupture of the blood-vessels.

Cavities in Phthisis are the result of several processes. They occur by (*a*) a slow or rapid process of fatty degeneration followed by ulceration; (*b*) as the result of chronic bronchitis and softening of bronchial tissue, with subsequent yielding to traction from without, for instance, in broncho-pneumonia or fibroid phthisis; (*c*) abscesses as a sequence of acute lobar pneumonia following hepatization or purulent infiltration; (*d*) as the direct result of gangrene, itself the immediate consequence of wounds of the lung, or blood poisoning, or of emboli. Local gangrene, on a small scale, occurs sometimes around cavities in lungs or in the bronchial tubes, and may give rise to temporary fetor of breath, but is not likely to lead to fallacious inferences, chiefly because of its temporary character, and the absence of permanent concomitant symptoms. It naturally follows that there are two locations for vomical, the pulmonary and bronchial tissues. Specimens illustrating the various forms of cavities are upon the table.

The limits of a paper designed to open a discussion on phthisis will not permit me to dwell upon the bearing of these pathological changes upon physical diagnosis. I therefore will close with a brief résumé of the general clinical symptoms which define the diagnosis of the various sorts of cavities. *Phthisical cavities* commonly are situated in one or both lungs, and are indicated as a development in a train of symptoms, which include as prominent features gradual emaciations, persistent loss of weight by reason of mal-assimilation of food, more or less frequent hæmorrhage and hectic, frequent pulse, hacking, intermittent cough, nummular sputum, expectorated in varying amounts throughout the twenty-four hours, and not periodically, as in bronchial dilatations, nor inaugurated by a gush of pus and mucus, as in abscess. *Cavities of the nature of abscesses.* The pathology of these cavities,

with its coincident clinical history, is not that of phthisis. The history of these cavities is either recovery by contraction (especially after wounds) or more frequently the abscess grows larger and larger until the entire lung may be destroyed, in this respect resembling phthisical cavities. When death occurs it is by exhaustion and hectic, where recovery takes place it is by free opening externally or internally and evacuation of the contents. At times the small amount of constitutional disturbances, slight degree of emaciation, good pulse, easy breathing, slight cough, and healthy complexion are in noticeable contrast with the physical signs. Cavities of the nature just described are mostly located in the base of the lungs. *Cavities due to bronchial dilatation.* Frequently for years the general health is almost unimpaired, and it is never so proportionately to the degree indicated by the physical signs. There is no hæmorrhage nor night sweats, and emaciation is not a pronounced symptom. The same physical signs persist for months or years unchanged, contrary to the history of most phthisical cavities, which continually alter with the advancing malady. The expectoration of bronchial dilatation is more abundant, fluid, and purulent than in catarrhal phthisis, and is usually brought up in the morning or evening by the cupful. It is not a constant spitting of nummular sputa, as in true consumption. In chronic cases the expectoration may become so fetid as to generate suspicions of gangrene; the cough is harassing, but is often relieved if the bronchial cavity is thoroughly emptied.

DR. MUSSER said that little could be added to this admirable and concise yet exhaustive résumé of Dr. Bruen on the morphology of phthisis. The limited experience that he had had in the study of the histology of phthisis had convinced him that in the microscopical structure of the lesions there is but little difference noteworthy in the primary changes. We have one school teaching that inflammation, another that tubercle, is the primary element. I cannot but agree with the author of the paper in the statement that the disease varies histologically with the variance in the intensity of one of these elements. In both we have epithelial proliferation and accumulation, changes in the vascular and lymphatic tissues (tubercle), and increase in the interlobular connective tissue. So intimately is the evolution of each of these processes connected that a classification like that of Greene [1] seems most proper. (A.) Consolidation, intra-alveolar. (B.) Consolidation involving mainly alveolar walls. (C.) Consolidation, consisting largely of intra-lobular connective tissue. Without absolute committal in either way, and yet in the line of exact truth, the distinction thus given seems to cover the entire histological ground.

Dr. Musser has had abundant opportunity for the study of the clinical aspect of phthisis, and although an arbitrary histological distinction of its varieties cannot be made, it is of the utmost importance as in fluencing treatment, and hence the prognosis of the case, to have a distinct and definite idea of the clinical varieties. The importance of the subject will be sufficient apology for the clinical remarks. Ante- and post-mortem observation has led him to adopt the following classification as convenient, systematic, and embodying the various phases of the disease: —

A. Acute. (1.) Catarrhal pneumonia.
(2.) Pneumonic or caseous phthisis.

[1] Lancet, 1882.

(3.) Pulmonary tuberculosis.
(4.) Miliary tuberculosis.

B. (1.) Catarrhal pneumonia, tubercle may be secondary.
(2.) Tuberculosis.
(3.) Interstitial or fibroid phthisis, tubercle may be secondary.

It is scarcely fair or proper to call acute catarrhal pneumonia a kind of phthisis, as it only is related as a possible primary factor. So seldom is it recognized and so baneful are the results of non-recognition, and hence inactive and inadequate treatment, that it is important to show its relation. It will be observed that catarrh and tubercle are distinguished, and so for *convenience* and *contrast* we may term the kinds "catarrhal" and "tubercular." Perhaps a clew to the pathology of phthisis may be found in defining the characteristics of each. In the first place there is a marked difference in the predisposing causes of the disease, — hereditary and diathetic condition. Thus tubercular phthisis is markedly hereditary, catarrhal is not; the tubercular is associated with the tubercular diathesis and a phthinoid chest, the catarrhal in some with the scrofulous diathesis and a perfect chest. Then the mode of onset differs greatly. In the former the general symptoms are more marked, the pulmonary symptoms in abeyance; in the latter the pulmonary symptoms are more marked, the general slight. Emaciation, loss of appetite, and dyspepsia precede or accompany the development of the former; they do not occur until late in the latter. Amenorrhœa and changes in the voice also occur early in tubercular phthisis. In tubercular phthisis hæmorrhage occurs more frequently and earlier than in catarrhal. In tubercular phthisis dyspnœa is a more marked and early symptom, and is out of proportion to the physical signs. Debility is more marked and more readily induced in tubercular phthisis. The temperature range is not so high early, and does not have the long daily sweeps in the late stages in tubercular as in catarrhal phthisis. With a doubtful mark it seems pleurisy, and chest pain is more common and constant in the tubercular than in the catarrhal form. The physical signs are bilateral and not pronounced in the tubercular form; they are unilateral and pronounced in the catarrhal form. The progress of the tubercular form is rapidly and progressively downward; of the catarrhal slow and in spurts. Tubercular phthisis is contagious (?) and auto-infective.

Over and over again do cases present themselves at the University Hospital and Dispensary with just such definite and broad distinctions, which distinctions should determine the line of treatment to be adopted, the catarrhal form requiring a more active local and general antiphlogistic treatment. It is not to be forgotten that the cases are not always, I may say generally, so easily distinguished, while the picture does not apply to acute miliary tuberculosis or fibroid phthisis. In a previous discussion on phthisis Dr. Musser had held that acute primary plastic pleurisy did not occur save in a tubercular subject, and hence was secondary to that diathesis. That statement is possibly too broad, and it should be that frequently recurring acute pleurisies occur only in the tubercularly diathetic, and are antecedent to the development of phthisis. The recognition of exocardial and subclavian murmurs, leads one to say that persons having such sounds are *threatened* with phthisis.

DR. ESKRIDGE said that he had been much interested in Dr. Bruen's remarks in most of which he con-

curred. As to pleurisy antedating phthisis, it was an old view which had lately been revived. He had been struck with the frequency of chest pains preceding phthisis, in over seven hundred cases of which he had notes; this symptom was noted in more than two-thirds. This pain may be on the opposite side to that of the affected lung. Interstitial phthisis is not always a chronic affection, Dr. Barlow and others having reported cases which proved fatal in six months. Hæmorrhage in his experience was a very common symptom in this variety of phthisis.

Dr. Eskridge called attention to the fact that cardiac valvular diseases, especially mitral regurgitations attended by venous congestions and coming on after birth, are rarely associated with phthisis, while congenital deformities of the heart attended by venous stasis, etc., are followed, according to some eminent authorities, in nine tenths of the cases, by tuberculosis of the lungs.

DR. SHAKESPEARE said that one point made by the lecturer had especially struck him as being opposed to his own experience, namely, that the earliest part of the lung attacked was generally the root. He had usually found the consolidation at the periphery of the lobe, often forming as it were a shell of solid lung, perhaps an inch thick, while the central or deep portions would be either not at all or but little affected. This peripheral consolidation seemed to have no particular relation to initial pleurisies, for the consolidations were quite frequently met with in cases almost free from pleurisy and old adhesions. He had also very often noticed at autopsies after death from intercurrent diseases wedge-shaped patches of solidified lung tissue having the base at the periphery of the organ, and a slightly raised surface much like infarcts, and containing miliary tubercles whilst the intervening pulmonary tissue was normal.

DR. FORMAD asked Dr. Bruen what he considered was the difference in the pathology of acute and chronic phthisis. Also on which side the disease most commonly occurred. Dr. Formad also desired to put on record some new observations on the histology of phthisis, made by W. H. Mercur in the pathological laboratory of the University of Pennsylvania, which he narrated as follows: That acute phthisis (all fatal cases) is invariably complicated with croupous pneumonia, which conditions the lethal termination; that the lining of the bronchioles and the endothelium of the blood-vessels plays a very active part in the formation of organized tubercle granulations, filling and widely distending the lumena in both instances. The existing observations on this point, as far as I remember, refer only to blood-vessels, and then merely to cheesy, broken-down material obliterating vessels, or occasionally to the formation of giant cells, or to something which in transverse section simulates a giant cell. Mr. Mercur states that the obliteration of bronchioles by living, organized granulation tissue is the most common starting-point for pulmonary tubercle granulations, and forms the greater bulk of the latter. He also found that the exudate within the air vesicles in acute phthisis was capable of undergoing complete organization, and that a group of such blocked-up air vesicles with organized exudate is usually called (erroneously) a miliary tubercle, the outlines of the air vesicles being mistaken for submiliary tubercles. Mr. Mercur had failed to find a single true miliary tubercle in a large number of thoroughly studied cases of phthisis, and agrees with those who regard miliary tubercle nodes as secondary products only. Dr. Formad desired distinctly to state that Mr. Mercur's observations were made on, and apply only to, the lungs.

DR. TYSON was interested to note how much histological investigation has contributed to our knowledge of the nature of these important processes under discussion; and while he was ready to admit that we owe much to experimental pathology, he felt that our present more correct notions were the result of microscopic studies of the human tubercular lung. The point to be insisted upon is that all these processes are tubercular and all are inflammatory, the catarrh of the lung and tubercle granulations being in all cases the initial lesion, whence it extends peripherally by desquamative catarrhal pneumonia or centripetally by a tuberculous peribronchitis, the former furnishing the rapid and the latter the slow forms of phthisis. That pleurisy is often the initial lesion of tuberculosis he thought had long been acknowledged.

DR. SHAKESPEARE said that the observations reported by Dr. Formad for his pupil reflected great credit upon both, and was another testimony of the value of the work done in the pathological laboratory of the university, but at least two of the announcements, for which novelty and originality were claimed, had been forestalled years ago by other observers. He had particular reference to the organization of the products within the alveoli of the lung, and the announcement that the walls of the minute blood-vessels by a proliferating endarteritis and periarteritis formed the miliary tubercle. The former is not only recognized and described in Green's Handbook of Pathology, but is most beautifully *illustrated*. The latter has been repeatedly observed and published, sometimes with illustrations. This origin of tubercle is distinctly referred to in the text-books of Wagner, and Cornil and Ranvier. All these books are in the hands of the university students.

DR. FORMAD said that existing observations on this point, as far as he remembered, referred only to blood-vessels, and then merely to cheesy, broken-down material obliterating the vessels, or occasionally to the formation of a giant cell, or to something which in transverse section simulates a giant cell.

In closing the debate upon the subject DR. BRUEN said that he coincided with Dr. Tyson in the opinion that phthisis was rarely associated with heart disease. In mitral regurgitation there was often indeed a thickening of the pulmonary substance allied to the indurative changes in the other organs from like causes. Advanced fibroid disease with cavities, as shown in one of the specimens exhibited by him through the kindness of Dr. Hinsdale, he had not met with heretofore. Dr. Formad's query as to the relative frequency of phthisis upon the right or left side he felt must be answered by the statement that one side was as liable to disease as the other, while, probably, in a small majority the right side was most frequently involved. He thought that the peripheral portions of the apices anteriorly was the most common starting-point, where there was much desquamative pneumonia and rapid phthisis, while the roots posteriorly were primarily attacked in the more slowly developed forms of broncho-pneumonic phthisis. The roots of the lungs are the seats of the latent phthisis developed as the sequential lesion of croupous pneumonia. Dr. Bruen dissented from the view that croupous pneumonia was a

frequent cause of death in phthisis. He believed that in the rapid, as well as in the more latent, form of phthisis, death was preceded and hastened by a development of the tubercular nodular tissue to which allusion had been already made. This tissue completely fills up and chokes the acinous pulmonary structure, causing dyspnœa, etc.

Recent Literature.

Compend of Anatomy; for Use in the Dissecting Room and in preparing for Examinations. By John B. Roberts, M. D. Third edition. Philadelphia: C. C. Roberts & Co. 1882.

If we remember rightly, we spoke rather kindly of this little work when noticing a former edition, and, indeed, compared with other works of the same class, it is deserving of some praise. We must say, however, that we look on the success of similar books as very detrimental to the knowledge of anatomy. The purpose for which they are bought is to enable the student to pass examinations with as little trouble, and, consequently, real knowledge, as may be. It is not certain that in all respects this book is good enough to much facilitate this devoutly to-be-wished consummation. Let us take one or two examples almost at random. "The fingers are each supplied by two arteries on the dorsal and two on the palmar surface, which come from the arches, or from the interosseous branches." It is stated that Peyer's patches may be circular or oval, which is true, but in point of fact they are nearly all oval. The internal cutaneous nerve is omitted from a kind of a diagrammatic description of the brachial plexus apparently because it would interfere with its symmetry. Books of this kind will be written as long as there is a demand for them. The remedy is in the hands of examiners, who should endeavor to frame questions demanding real knowledge to answer.

Experimental Pharmacology. A Handbook of the Methods for Studying the Physiological Action of Drugs. By L. Hermann. Translated, with the author's permission, with notes and additions, by Robert Meade Smith, M. D. Philadelphia: H. C. Lea's Son & Co. 1883. 12mo. 201 pages.

This little book deserves a warm welcome, as it draws attention to a department of applied physiology by far too much neglected in American medical schools. The original appeared in 1874, but the translator has added much which will help to bring the book up to the level of the present. Thirty-two illustrations have been introduced, too few or too many according to the reader's familiarity with physiological technics. A description of isolated electrodes is, unfortunately, wanting.

The chemical side of the subject is rather slighted; for example, the determination of the oxygen consumption and carbonic acid production is too lightly passed over, this being a matter on which the tyro needs very particular instruction. The section on ozone (page 30) will hardly meet with general approval. The measurement of temperatures has also become too important to receive so little attention, and deserves a long note. There have been many recent observations which point out the Scylla and Charybdis of thermographers, particularly when busied with rabbits and guinea-pigs. Good methods of producing fever for pharmacological study might also have been included among the additions. The new way of working with crushed tissues whose cells still live ["Organbrei," organ pulp (?): Bunge, Schmiedeberg, W. Kochs, Binz, Seegen] is of so much promise that an explanation could have been given with advantage.

The translation is good; the appearance of the book excellent. The proof has been usually carefully read. There is a good index. May a new edition be called for soon, and the editor then feel inclined to add a chapter on the literature and one on the best way to use the more common drugs which have an interest in this connection. J. W. W.

Transactions of the Medical Society of the State of Pennsylvania at its Thirty-Third Annual Session, held at Titusville, May 10, 11, and 12, 1882. Published by the Society. Philadelphia. 1882.

This volume of 450 pages affords a most satisfactory example of what may be accomplished by a State medical society in the line of its proper and legitimate functions. A large portion of the book is occupied with valuable original papers on professional topics, and there is also much collateral information of interest to physicians, as for instance a list of all the medical schools represented by practitioners in the State, which may be taken as a tolerably complete list of the medical schools of the country. Most of the leading schools of Europe also are represented by one or more graduates. The number of registered practitioners is 6492.

— The February number of the *American Journal of Obstetrics* gives great prominence to the advisability of immediate removal of the secundines after abortion, contrary to the teaching of many of the treatises on midwifery and the practice of many of the older men in the profession. The most striking of the articles in our contemporary is that of Dr. Mundé, which is accompanied by a list of fifty-seven cases in which the placenta was removed by the writer with only one death, and that from septicæmia which had developed before the operation. The symptoms calling for the removal were in eight cases exhausting hæmorrhages, and in five present septicæmia; yet of the total fifty-five made an uninterrupted recovery. The method of removal was in twenty-two manual, and in thirty-one instrumental (curette and forceps). Ergot was used in the remaining four cases.

— Americans are credited in England with the discovery of a new panacea. It has the advantage of simplicity, for it consists of half a glass of very hot water, taken morning and evening, or whenever a "pick-me-up" is required. It is said to cure gout, rheumatism, indigestion, dyspepsia, and many other of the complaints to which flesh is heir. It appears that it has been tried with good effect by a considerable number of people in England, and notably by those whose brains are heavily taxed.

Medical and Surgical Journal.

THURSDAY, MARCH 8, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the under signed, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

FREE TRADE IN DIPLOMAS.

WE have no desire to weary our readers with too frequent reference to the establishment, under the laws of Massachusetts, of so-called medical schools, with the power to grant degrees without limit or restriction. The condition of affairs is so startling that it merits earnest consideration, and at the risk of seeming wearisome we propose to refer again to some of the curious conditions which result from the existing law, with the hope that our importunity may weary our officials into the execution of statutes whose present working proves anything but salutary, or if the laws are insufficient, induce our legislators to amend them.

The law in question was evidently framed with the intention of giving protection in the simplest way and at the least trouble and expense to persons desiring to associate themselves together for manufacturing, charitable, and other purposes, and doubtless it serves its object.

But the very simplicity of the required proceedings opens the door to fraud. Sufficient guarantees of honesty and good intentions are not required, and the State too easily gives its sanction to it knows not what. In most matters this laxity of the law can work no harm. It is useless to seek its protection to form a corporation for the transaction of any nefarious business, for no incorporation under general laws could save the perpetrators from punishment under other laws which control such matters. Institutions incorporated under this law, ostensibly for educational purposes, really for the sale of diplomas, have shown little power to do harm outside of medicine. Other degrees than that of Doctor of Medicine may be and perhaps are sold, but they are subject to somewhat different conditions. The degrees given for knowledge not professional have, we suppose, for reasons hardly necessary to enumerate, little, if any, market value. An institution which attempts to sell degrees in law or divinity would find a very small market for their wares, for other tests than the mere possession of a diploma are employed in these two professions. A medical diploma, however, is useful in impressing the ignorant, who are unable to distinguish as to its value or genuineness; and in by far the greater number of these United States a man may make any claim for himself, may arrogate to himself any powers derived from heaven or hell, may do almost anything he pleases, short of violent murder, without let or hindrance, provided only he style himself a practitioner of medicine.

The law to which we have referred simply provides that seven or more persons desiring to become incorporated, shall meet and choose officers, fill out certain printed forms, and pay a fee of five dollars. The general character of the act is shown by its Second Section: —

"SECTION 2. Such a corporation may be formed for any educational, charitable, benevolent, or religious purpose, for the prosecution of any antiquarian, historical, literary, scientific, medical, artistic, monumental, or musical purpose, for promoting temperance or morality in the Commonwealth; for supporting any missionary enterprise having for its object the dissemination of religion or educational instruction in foreign countries; for encouraging athletic exercises or yachting; for encouraging the raising of choice breeds of domestic animals and poultry; for the association and accommodation of societies of Free Masons, Odd Fellows, Knights of Pythias, and other charitable or social bodies of a like character and purpose; for the establishment and maintenance of places for reading rooms, libraries, and social meetings."

If the formation of a medical school is the object of the association it is not necessary under this law that any of these individuals should have any knowledge of medicine, or that the corporation should possess one dollar of capital; and according to a recent decision quoted in these pages there is not the slightest limit to the issue of diplomas. It is not necessary that the recipient should ever have been seen by any member of the corporation or its supposed instructors. Indeed, if such an interpretation of the law is to stand, we can see no reason why diplomas should not be given like chromos to every purchaser of a paltry vial of any nostrum one of these diploma-making corporations chooses to stamp with the seal of its approval.

It was believed at the time we called attention to the subject and the ruling of the United States Commissioner that that official's view of the matter was shared by the legal authorities of the State. The Attorney General was present during the delivery of that opinion, and it was believed that he acquiesced in it, as the prisoner — the representative of the Bellevue Medical College — was discharged, and no farther action taken in the premises. We are glad to know, however, that a different opinion now prevails. In reply to a note from the State Board of Health, Lunacy, and Charity, asking the opinion of the present Attorney General in regard to the right of institutions incorporated under the general law to confer degrees, an answer, signed by the Assistant Attorney General, was given, of which the conclusion is as follows: —

"A degree carries with it a certain mark and distinction, and in the case of colleges the Legislature has given expressly the right to grant degrees, and in the case of other educational institutions has as expressly omitted to give it. This distinction cannot be accidental, and it is clear the Legislature did not consider the power to grant degrees as one of the ordinary powers necessary and proper for all educational institutions, but a special power, privilege, and franchise, which the Legislature has from the beginning carefully

guarded and shielded from abuse, and which it still keeps under its control and care, never granting it by implication, but by an express act.

"The general law does not confer the right to grant degrees."

This matter has no connection with the regulation of the practice of medicine. In regard to the propriety and feasibility of such regulation we know there are wide differences of opinion in the community and in the profession itself. No man, whatever his views in regard to the practice of physic, who has any regard for common honesty, can approve of the fraudulent sale of diplomas, and whatever may be right in this matter in the eyes of the law it is certainly a fraud *de facto*, if not *de jure*, to certify that a man, entirely unknown to the certifier, is learned in medicine, when the only evidence he offers is the payment of a paltry fee. An honest degree has no legal status, so far as we know; its possession carries with it no privilege in this State that we are aware of, but that does not make the issuing of dishonest ones less dishonorable, and in the name of common honesty, and we trust none of our readers are so skeptical as to inquire, —

"In what age hath honesty been common?"

we hope the fraudulent production may be deprived of even the shadow of encouragement by the State of Massachusetts.

WHAT MAY REASONABLY BE EXPECTED FROM MORE INSTRUCTION IN MENTAL DISEASES.

A committee of the National Association for the Protection of the Insane and the Prevention of Insanity has been delegated by the council of the Association to call the attention of the medical faculties in this country to the need which medical students have of more instruction, didactic and clinical, in mental diseases, on the grounds that the incipient stage of mental disease must always be passed under the observation of the general practitioner (which is by no means true); that usually the diagnosis of insanity is incorrectly or imperfectly stated in medical certificates; that a rational attempt to treat the case at home is not made, because the physician shrinks from assuming a responsibility for which he has never been prepared; that medico-legal cases are often complicated and rendered obscure by the ignorance of the physicians who are called to testify in regard to them, and that many cases of impending insanity are allowed to progress when an adequate knowledge of the subject might have enabled the family physician to ward off the catastrophe. The committee (composed of Drs. E. C. Seguin, M. Putnam Jacobi, and Margaret A. Cleaves) expresses the opinion that a training in psychiatry would enable the general practitioner to more successfully treat the mental symptoms exhibited by many patients not actually insane; that the time has come when in this country no course of medicine should be considered complete without attendance upon lectures and clinics on mental diseases; and that no student should be allowed to graduate without passing an examination in psychiatry. The different medical schools are urged, in a circular the language of which we have used quite nearly, to provide such instruction by means of a chair or lectureship in psychiatry and a clinic of psychiatry, held in an asylum for the insane, provided they have not already done so.

The purpose of the Association is certainly a most excellent one, and the results which it wishes to bring about are most praiseworthy. But it evidently expects too much, both in the prevention and cure of insanity, from the means which it proposes. Of mental disease, perhaps more than of any other, is the remark Dr. Holmes true, namely: "There are people who think that everything may be done if the doer, be he educator or physician, be only called in season. No doubt; but *in season* would often be a hundred or two years [perhaps not quite so much as that] before the child was born, and people never send so early as that." It is one of the mysteries of Providence, too, that parents who transmit to their children a bad mental organization are allowed to destroy what little chance they have in life by giving them a vicious training. Let us by all means have a society with a long name to regulate matrimony.

With regard to the complication of medico-legal testimony by ignorant experts, there will always be enough of that class, and it is precisely they by whom lawyers can often make their points best, so that they are not likely to fail of employment as long as our present laws stand. The proper certifying and committing of the insane to asylums will be advanced by better medical education, but a competent lunacy commission is quite necessary to that end.

THE BACILLUS TUBERCULOSIS AND THE CONTAGIOUSNESS OF PHTHISIS.

In a paper on tuberculosis, read lately before the New York County Medical Society, Dr. Heitzman expressed considerable doubt as to the infectiousness of the disease, as claimed by Koch and his followers especially since the discovery of the *bacillus tuberculosis*. It was a problem yet to be solved, the reader said, whether bacilli were the cause or merely a product of tuberculosis. In regard to the experiments on animals, he remarked that the German investigators found that rabbits and guinea-pigs developed tuberculosis after the insertion of bits of wood, glass, aniline dye, and other substances under the skin, and that simple injuries sometimes resulted in the production of the disease. It seemed probable that these animals after long confinement, especially in laboratories, were particularly predisposed to tuberculosis.

On the invitation of the president, Dr. Belfield, of Chicago, made a reply to the paper, in which he reminded Dr. Heitzman that the very investigators whom he had cited as having proved by their experiments that the rabbit and the guinea-pig inoculated with almost any extraneous substance would develop tubercu-

losis had afterwards acknowledged that those experiments which were successful in accomplishing this result had been conducted exclusively in laboratories where tuberculous matter had been in almost constant use for long periods of time in the prosecution of other researches. It seemed probable, therefore, that the wood, glass, aniline, or other substance used had in reality become infected by the tuberculous matter, for when the same experiments were repeated by the same individuals outside of the laboratory tuberculosis failed to develop. It was owing to these later experiments that one of the physicians referred to finally adopted the theory of the infectious nature of tuberculosis. Furthermore, Koch had shown that animals, such as the cat, dog, and rat, which were not naturally predisposed to tuberculosis, had almost invariably developed the disease when inoculated with tuberculous matter. The experiments of various observers showed it to be true that different individuals of the same species were more disposed than others, by reason of physical condition, to the same disease. Tuberculosis seemed to occur spontaneously in some instances, but so also did diseases which were distinctly recognized as infectious, like pyæmia, for example. Many physicians were known to have contracted this disease through abrasions on the hands by contact with pyæmic patients, while others, with simple injuries, developed pyæmia without any apparent contact whatever with pyæmic poison. It was undoubtedly true, however, that the specific pyæmic poison was present in every instance, and he held that tuberculosis presented a parallel case. Whether bacilli were the cause or a product of tuberculosis, he said in conclusion, would not be accepted as settled by the medical world until more extended experiments in the future had disproved or confirmed Koch's views.

REPORT OF THE COMMISSION TO INVESTIGATE THE WATER SUPPLY OF BOSTON.

COMMISSIONS have been simultaneously investigating the water supplies of Boston and New York, and at the same time the condition of the supply of Philadelphia caused the introduction of a bill into the Legislature of Pennsylvania to secure a commission, in the absence of a State board of health, to regulate the pollution of streams.

The difficulty in New York was in regard to the quantity of the supply, in Philadelphia it was the quality, in Boston both quantity and quality were to occupy the attention of its Commission. With the growth of our large cities and an increasing density of the population of surrounding districts certain common difficulties will present themselves for solution touching their water supplies, and certain legislative action will be required from their respective State governments. Insufficiency and impurity of the water supply are the two difficulties which all our larger cities are sure, sooner or later, to encounter under existing conditions. Insufficiency may be avoided by either a still more lavish supply or by a less wasteful use of water. Impurity may be guarded against to a great extent by the proper construction of storage basins, and by such legislation and execution of laws as will prevent or reduce to a minimum the pollution of streams which are sources of water supply by sewage or the refuse of manufactories.

Neither the origin of the troubles nor the remedies to be supplied are so far to seek or so difficult to apply, were it not for conflicting interests which confuse and obstruct any efforts in these directions.

In New York the Commission has reported that an increased supply of water is required, the president of the Board of Health taking the ground that a charge according to the quantity consumed, or the use of water meters, would result in a restriction of the amount used by the poor.

The Boston commissioners report that measures should be taken at once to reduce the consumption. As this averages at present one hundred gallons daily for each inhabitant, and fifty or sixty gallons is usually considered a very liberal allowance, there seems to be no reason why even the poor should question the wisdom of the commissioners. Moreover, a charge need only be placed on water used in excess of a certain fixed amount.

The report of the Boston commissioners forms a document of nearly two hundred pages, the report proper occupying seven pages, and the testimony the rest of the space. The report itself is signed by all the members of the Commission, and some concessions of individual views must have been necessary to reach such a result. The Cochituate and Sudbury supplies only were investigated. The Commission availed itself of the best testimony to be had, and the report is evidently based on the best part of that testimony, which is equivalent to saying that it is a plain, sensible, straightforward paper, such as the citizens of Boston desired and had a right to expect.

The recommendations in regard to the Sudbury River supply are thus summed up: "(1.) A conduit should be built across Farm Pond. (2.) The aqueduct to Boston should be thoroughly cleaned each year. (3.) The basins should be deepened around the edges, no shallow flowage of less than eight feet tolerated, and all loam should be removed from this part of the bottom. If this were done its effects upon the water might be tried for a year before commencing the much greater business of removing the large accumulations from the centre of the basins. (4.) Measures should be taken at once to reduce the consumption. With these precautions the Commission have no hesitation in saying that they believe the Sudbury River can be made a sufficiently healthy and satisfactory supply, although it will probably always retain a slight color as compared with the Cochituate."

The following are the recommendations in regard to the Cochituate supply: "First, to abandon all shallow flowage where the water is less than eight feet deep, and remove what loam there may be in water of that depth. Second, to thoroughly cleanse the Cochituate aqueduct every year to insure the removal of the sponge. Third, to prosecute without delay the people now polluting our supply, or else, if in the

opinion of counsel the present statutes are insufficient, to seek legislative relief."

The above recommendations exhibit the sources of existing difficulties in the supply of water, and suggest, we believe, the most promising remedies in so far as difficulties or remedies are at present understood, and this is all that reasonable citizens can demand from this Commission.

Incidentally it is recommended that periodic scientific examinations of the water, extending over a term of years, should be made. These should be both of a chemical and biological character, and might furnish data from which interesting and perhaps valuable conclusions could be drawn.

Chemistry seems to have done nearly as much for us already as can be anticipated from it in this direction, and it would be rather to the labors of the mycologist that we should look for new results. An entirely suitable person for conducting such work is not easily found.

Chemistry may tell us when there is danger, but it cannot assure us of safety. The recently attempted application of Koch's method of cultivation of organic germs in gelatine to the physiological and organic testing of polluted waters offers some hopes of reaching positive results. At present we can only say positively from experience that micro-organisms such as those supposed to represent the causative poison of typhoid fever, for instance, are robbed of their activity neither by filtration through extensive banks of earth nor by dilution in very large bodies of water.

Incidentally, again, the inquiries of this Commission suggest the importance of some system of metropolitan sewerage for Boston and its surrounding towns. The laws on the statute books to prevent the pollution of streams which are sources of water supply may be in themselves sufficient, — just as we are now told by her Attorney-General that the Massachusetts laws are sufficient to prevent indiscriminate trade in diplomas, — but the execution of such laws is attended with much friction here as elsewhere, where a dense manufacturing population is found with its many vested interests, and where no other resource presents itself for the disposal of sewage.

The *Westminster Review* for October, 1882, contains an article on River Pollution in England, which our readers who are interested in the subject might refer to with profit.

We are glad to compliment the commissioners on their recommendations, and hope before very long to be able to record their conscientious and successful application.

MEDICAL NOTES.

— Professor Simpson, in his address on the history of the chair of midwifery at the University of Edinburgh, says much that is interesting about the popular prejudice against "men-midwives" in Great Britain two centuries ago. So furious was the opposition to what was considered an immodest innovation that it was not safe for a medical man to be known as an accoucheur. The following quotation from Dr. Aveling's *History of English Midwives* illustrates the popular sentiment. Dr. Willughby, whose daughter was an expert midwife, says: "In Middlesex, anno 1685, my daughter, with my assistance, delivered Sir Tennebs Evank's lady of a living daughter. All the morning my daughter was much troubled, and told me that shee feared that ye birth would come by ye buttocks. About seven o'clock that night labour approached. At my daughter's request, unknown to the lady, I crept into the chamber upon my hands and knees, and returned, and it was not perceived by ye lady. My daughter followed me, and I being deceived through hast to go away, said that it was ye head, but she affirmed the contrary; however, if it should prove ye buttocks, that shee knew how to deliver her. Her husband's great Oliverian power, with some rash expressions that he uttered, flowing too unhandsomely from his mouth, dismayed my daughter. She could not be quieted until I crept privately again the second time into ye chamber, and then I found her words true. I willed her to bring down a foot, the which shee soon did, but being much disquieted with fear of ensuing danger, shee prayed mee to carry on the rest of the work."

— The California Assembly has passed a bill to meet the plea of insanity in cases of murder. The indicted man who pleads it is to be first examined as to his sanity without regard to the crime charged. If decreed to be sane he is tried for murder, and his false plea is to be treated as an aggravation of the offense. If shown to be insane he goes to an insane asylum at once for life, so that he shall never harm anybody else. If however, any evidence turns up afterward to prove that the decision was wrong, then he is to be taken and tried for murder on the original charge.

— Governor Stephens, of Georgia, makes the remarkable proposition to place in the National Statuary Gallery at Washington the statue of Dr. Long, of Athens, Georgia, who was, says Governor Stephens, "two years ahead of Wells and Morton in his application of sulphuric ether for the relief of pain in surgical operations, and to whom, therefore, belongs the honor and glory of this greatest discovery of modern times." Dr. Long's claims as a discoverer were strongly advocated by Dr. J. Marion Sims some years since.

— Who will depreciate the value, even pecuniary, of pathological researches? A modest physician in Paterson, N. J., has presented the following bill to that city: "To breaking up the ravages of diphtheria by showing it to consist of a few ounces of foreign matter in the blood, which can only escape through the pores, $1500; to lowering the death rate of the city to the extent of 538 lives in two years by means of circulars, letters, cards, and tracts, showing what fever consists of, $2000; to stopping ravages of smallpox by showing that 100 cases of it can be expelled from the blood by the vigorous action of the pores, produced by hot tea, $1500. Total, $5000."

— The officers of the medical corps of the United States Navy, in order to establish more intimate social

and friendly relations among its members, to furnish occasions for the interchange of professional experiences, and to assist each other in scientific inquiry and research, have agreed to form an association, to be entitled The Naval Medical Society, in which every officer of the medical corps shall have the right of membership upon notifying the secretary that such is his desire. The Society is to hold regular and stated meetings on the first Thursday of every month, in the city of Washington, and at such other times as the business committee may consider advisable, or when five other members may so request. At the annual meeting, held January 4, 1883, the following officers of the Society for the current year were elected: President, Albert L. Gihon, M. D.; Vice-President, John M. Browne, M. D.; Secretary, James M. Flint, M. D.; Business Committee, Thomas J. Turner, M. D., Adolph A. Hoehling, M. D., Thomas H. Streets, M. D.

— Dr. Snow, city registrar, says that a census of Providence, taken in the month of January by men of experience and responsibility, shows a total population of 116,755, of whom 55,736 were males, and 61,019 were females. The gain in population since the United States census of 1880 is 11,898, or 11.34 per cent., an average of 4.53 per cent. annually.

NEW YORK.

— At the meeting of the Academy of Medecine held March 1st, Dr. Isaac E. Taylor read a paper on The Naturally Faulty or Contracted Pelvis, with the History of a Case of Labor, the non-delivery of the child, and the death of the mother, after craniotomy and cephalotripsy.

— The annual commencement exercises of the Buffalo Medical College were held February 27th, when a class of fifty-six graduates received diplomas.

— The commencement of the American Veterinary College was held at Chickering Hall, February 28th. Prof. Charles A. Doremus awarded a number of prizes, and the valedictory address was delivered by Samuel K. Johnson, after which the Rev. Henry Ward Beecher made the address to the graduating class, which numbered twenty-two.

Miscellany.

HOW THEY MAKE "COD-OIL" AT SWAMPSCOTT.

THE *Edinburgh Medical Journal*, February, 1883, thus describes one of the important though unsavory interests of a neighboring watering-place: Swampscott is a little town upon the coast of Massachusetts, not far from Lynn, situated near the head of a bay between Nahant and Salem. Off this ancient haunt of fishermen, at a distance of about nine miles, is a place called the "rocks," where, in the winter, the codfish come in shoals to spawn, and the striped bass sport themselves in the summer. During the winter months, be the weather what it may, unless the wind be rising for a gale, a little after midnight men may be seen going about the village, stopping here and there at houses, rousing the fishermen, who by and by gather in groups about the shore, each with his "dory," that well-known model of Yankee ingenuity which at the great Berlin fishery exhibition excited so much attention. The dories and their owners are soon aboard the various schooners in waiting, and by five A. M. the fleet is at the "rocks;" so, when the daylight is sufficient, the dories anchor about their respective larger crafts, each boat with its single occupant, who is soon hard at work robbing the sea of its life. About three P. M. the signal is given from the schooners to come aboard; the dories hasten to their floating castles, with pitchforks the various "catches" are soon thrown aboard, and sail is made for home. During the passage the fish are gutted, the entrails cast into the sea, and the livers, some of them large enough to fill a quart mug, are put into baskets. When the shore is close at hand, the fish are put again into the dories; but the roughness of the sea usually is such that these boats, when loaded, cannot land, and into the icy sea-water the horses are driven until the carts reach such a place that the codfish can be put in them, when off they go, to plod the night through for the early Boston market. The livers are immediately sorted over and the gall-bladders carefully removed. The great, luscious, flabby masses are thrown into a large oak tub; with this are connected steam pipes. When the receptacle is full and closed, low-pressure steam is turned on, and for about two hours and a half cooking goes on. Then the plugs are taken out at the bottom, and the hot oil streams into buckets. It is now placed in butts in the "cooling room," and allowed to stay there until it freezes solid. So it is kept till opportunity offers, when it is put in canvas bags holding about four gallons each. These bags are then placed regularly upon a heavy oak table provided with outer grooves for conducting liquid, until twelve gallons are in a row. On this is laid a slab, then canvas bags, and so layer after layer, until about eighty gallons are piled up. A ton of pig-iron is then placed upon the top slab of oak, and the oil begins to flow out. In about twelve hours dripping ceases, and the apparatus is taken apart. Inside of the bags is found a yellowish, butter-like mass as hard as tallow, which is nearly pure stearin, with liver débris and fibres. This goes to the soap-makers, whilst the oil finds its way to the Massachusetts General Hospital and other places where the superiority of the finest American oil over the Norwegian is recognized.

A LOW TEMPERATURE.

A CORRESPONDENT of the *Medical Record* reports a case of subnormal temperature, which, if correctly observed, upsets the common teaching of physiology: —

"An intoxicated man spent the night of December 18th in an open coal shed. He had the protection only of ordinary clothing, and when found, late the next forenoon, was apparently dead. Closer inspection revealed signs of life, and after six hours our efforts to restore him were successful. His temperature was taken about four hours after he was found. The thermometer was a verified, self-registering one, graduated from 90° F. upward. The register could, however, be shaken down for a space equal to 5° more. It was so fixed and placed in the rectum, where it remained for seven minutes. The register was not lifted at all. The patient's temperature, therefore, did not exceed 85° F. We cannot say how much lower it was. Shortly after consciousness was regained the axillary temperature was 100.2° F."

REPORTED MORTALITY FOR THE WEEK ENDING FEBRUARY 24, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	679[1]	245	17.22	19.04	5.18	2.94	—
Philadelphia	846,984	353	107	17.83	7.07	9.06	1.42	1.46
Brooklyn	566,689	262	89	18.72	22.54	5.73	4.96	—
Chicago	503,304	200	83	17.50	14.50	3.50	3.50	.50
Boston	362,535	169	51	11.80	15.93	5.90	1.18	—
St. Louis	350,522	139	41	23.04	20.88	9.36	5.04	—
Baltimore	332,190	171	78	32.48	11.60	9.86	6.38	14.60
Cincinnati	255,708	93	31	22.82	19.56	5.44	6.52	—
New Orleans	216,140	144	30	34.00	9.71	1.39	1.39	27.76
District of Columbia	177,638	59	19	10.16	11.86	3.39	5.07	—
Pittsburg (1883)	175,000	58	—	22.41	15.52	—	—	—
Buffalo	155,137	76	37	21.04	13.15	9.21	6.58	—
Milwaukee	115,578	—	—	—	—	—	—	—
Providence (1883)	116,755	35	11	11.43	14.29	2.86	—	—
New Haven (1883)	73,000	34	12	17.64	26.46	5.88	—	—
Charleston	49,999	18	5	—	5.55	—	—	—
Nashville	43,461	18	8	11.11	27.77	—	5.55	5.55
Lowell	59,485	31	9	9.66	3.23	3.23	—	—
Worcester	58,295	29	8	10.34	20.68	3.45	—	—
Cambridge	52,740	23	8	17.39	21.73	8.69	—	—
Fall River	49,006	16	9	18.75	6.25	12.50	—	—
Lawrence	39,178	11	5	9.09	—	9.09	—	—
Lynn	38,284	17	5	—	17.65	—	—	—
Springfield	33,340	16	4	18.75	6.25	12.50	—	—
Salem	27,598	6	0	—	—	—	—	—
New Bedford	26,875	15	5	—	20.00	—	—	—
Somerville	24,985	—	—	—	—	—	—	—
Holyoke	21,851	11	4	45.45	9.09	27.27	—	—
Chelsea	21,785	8	3	62.50	12.50	37.50	—	—
Taunton	21,213	4	0	—	—	—	—	—
Gloucester	19,329	4	1	—	—	—	—	—
Haverhill	18,475	7	1	—	—	—	—	—
Newton	16,995	4	1	—	—	—	—	—
Brockton	13,608	7	2	—	—	—	—	—
Newburyport	13,537	3	0	—	—	—	—	—
Fitchburg	12,405	2	0	50.00	—	—	—	—
Malden	12,017	8	2	12.50	—	—	12.50	—
Twenty-three Massachusetts towns.	186,352	66	13	13.64	15.15	6.06	1.52	—

[1] Including sixteen children killed during panic in school.

Deaths reported 2796 (no report from Milwaukee): under five years of age 927: principal "zymotic" diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 531, consumption 457, lung diseases 444, diphtheria and croup 165, scarlet fever 85, small-pox 73, typhoid fever 42, diarrhœal diseases 38, whooping-cough 31, cerebro-spinal meningitis 24, malarial fever 20, measles 19, erysipelas 18, puerperal fever 16. From *typhoid fever*, Philadelphia nine, Chicago seven, Pittsburg six, New York and St. Louis five each, Brooklyn, Boston, Cincinnati, District of Columbia, Providence, New Haven, Worcester, Holyoke, Milford, and Southbridge one each. From *diarrhœal diseases*, New York 18, Brooklyn and St. Louis three each, Chicago, Cincinnati, Pittsburg, and Buffalo two each, Philadelphia, Baltimore, New Orleans, Providence, Lowell, and Cambridge one each. From *whooping-cough*, New York 13, Brooklyn six, Pittsburg four, Cincinnati and Buffalo two each, Philadelphia, Chicago, Baltimore, and New Haven one each. From *cerebro-spinal meningitis*, New York and Chicago five each, Fall River four, Philadelphia and New Orleans two each, Boston, Pittsburg, Lowell, Worcester, Fitchburg, and Quincy one each. From *malarial fevers*, New York seven, Brooklyn four, St. Louis three, Philadelphia and New Orleans two each, Chicago and Springfield one each. From *measles*, New York 12, Cincinnati two, Boston, Baltimore, New Haven, Holyoke, and Hyde Park one each. From *erysipelas*, Philadelphia four, Brooklyn and Boston three each, New York and Cincinnati two each, Chicago, Providence, and New Haven one each. From *puerperal fever*, Brooklyn four, New York, and Chicago three each, Boston two, Philadelphia, St. Louis, Cincinnati, and Cambridge one each.

Eighty-five cases of small-pox were reported in Baltimore, Pittsburg ten, Brooklyn two, Buffalo two; diphtheria 40, scarlet fever 24, and typhoid fever four, in Boston.

In 41 cities and towns of Massachusetts, with an estimated population of 1,186,411 (estimated population of the State 1,922,530), the total death-rate for the week was 19.94 against 16.09 and 21.25, for the previous two weeks.

In the 28 towns of England and Wales, with an estimated population of 8,620,975, for the week ending February 10th, the death-rate was 23.5. Deaths reported 3882: acute diseases of the respiratory organs (London) 390, whooping-cough 116, scarlet fever 80, fever 76, measles 46, diarrhœa 33, diphtheria 25, small-pox (Newcastle four, London two, Sheffield one) seven. The death-rates ranged from 13.4 in Derby to 33.3 in Liverpool; Cardiff 16.2; Brighton 20.2; London 21.5; Nottingham 22.2; Birmingham 23.9; Portsmouth 25; Sheffield 26.7; Manchester 27.1. In Edinburgh 26.8; Glasgow 30.6; Dublin 37.9.

For the week ending January 27th, in 169 German cities and towns, with an estimated population of 8,356,524, the death-rate was 26.5. Deaths reported 4265: under five years of age 1859; consumption 629, lung diseases 523, diphtheria and croup 190, scarlet fever 80, whooping-cough 74, typhoid fever 49, measles and rötheln 36, puerperal fever 14, typhus fever (Breslau, Posen, and Braunschweig one each) three, small-pox (Heilbronn one) one. The death-rates ranged from 15.3 in Metz to 35.9 in Dortmund; Königsberg 29.1; Breslau 31.1; Munich 32.2; Dresden 23.6; Berlin 23.7; Leipzig 23.7; Hamburg 30.7; Cologne 22.3; Frankfort 23.8; Darmstadt 20.6.

For the week ending February 10th, in the Swiss towns, population 494,390, there were 46 deaths from consumption, lung diseases 46, diphtheria and croup 15, diarrhœal diseases 14, scarlet fever four, typhoid fever two. The death-rates were, at Geneva 23.6; Zurich 22; Basle 25.4; Berne 28.2.

The meteorological record for the week ending February 24th in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
February, 1883.	Daily Mean.	Daily Mean.	Minimum.	Maximum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 18	30.402	28	22	40	88	65	48	67	NW	NW	W	14	7	7	S	F	C	—	—
Mon., 19	30.346	28	17	38	57	46	86	63	SW	W	W	7	10	7	O	C	O	—	—
Tues., 20	30.182	27	18	40	44	56	88	63	W	SE	SE	5	8	10	F	O	S	—	—
Wed., 21	29.863	29	23	43	47	46	64	52	W	NW	SW	12	18	11	C	C	C	—	—
Thurs., 22	29.915	34	21	44	64	54	61	60	SW	SW	W	12	10	3	O	F	O	—	—
Fri., 23	30.372	25	15	36	73	47	67	62	N	NW	NW	13	18	12	S	C	C	—	—
Sat., 24	30.669	24	11	35	30	56	77	54	NW	E	SE	7	8	11	C	C	O	—	—
Means, the week.	30.250	28	11	44				60										15.05	.20

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

LINES WRITTEN UPON AN INFANT'S FIRST BIRTHDAY.

BY L'ACCOUCHEUR.

INCARNATE dream of that which is to be;
Stupendous history of what has been:
The unknown past and future meet in thee.
Who shall record thy destiny, — and when?

There lives no poet who thy fame can sing,
Thou shalt have judgment only from thy peers.
Perhaps thy life with joy and praise shall ring,
Perhaps be passed in silence and in tears.

What shall thy mission be? wert thou forewarned?
Say, wert thou welcome, or didst thou arrive
Unwished for, hated, till thy birthday dawned?
Such is the fate of some. Since thou art here,

Oh! plead with mothers that they do not kill
The unborn infants Nature bids them bear.
Bid love and life their mutual course fulfill;
Bid life and love their mutual burdens share.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM FEBRUARY 23, 1883, TO MARCH 2, 1883.

BURTON, HENRY G., captain and assistant surgeon. The leave of absence granted October 2, 1882, is extended two months. Paragraph 2, S. O. 49, A. G. O., February 28, 1883.

FESSON, LOUIS S., captain and assistant surgeon. To be relieved from duty at Fort Clark, Texas, and assigned to duty at Fort Ringgold, Texas, as post surgeon. Paragraph 5, S. O. 20, Department of Texas, February 21, 1883.

SUFFOLK DISTRICT MEDICAL SOCIETY. THE SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE will meet at 19 Boylston Place, on Wednesday March 14th, at **7.45** o'clock. Dr. M. H. Richardson will report A Case of Empyæma. Dr. F. Minot will open the discussion. Dr. C. P. Putnam will present a paper upon Diphtheria. Drs. F. I. Knight and J. Collins Warren will open the discussion.

ALBERT N. BLODGETT, *Secretary.*

RHODE ISLAND MEDICAL SOCIETY. — A regular quarterly meeting of the Society will be held in Lyceum Hall, 62 Westminster Street, Providence, on Thursday, March 15, 1883, at ten A. M. Papers as follows: Dr. G. T. Swarts, Recent Statistics of Typhoid Fever in Providence; Dr. S. S. Keene, Treatment of Pneumonia; Dr. E. M. Snow, Early History of Vaccination in Providence. G. D. HERSEY, *Secretary.*

CORRECTION. — Mr. A. B. Haggett, reported by mistake in the last issue of the JOURNAL as succeeding Mr. G. P. Carter on the Massachusetts Board of Health, Lunacy, and Charity, really succeeds Hon. Ezra Parmenter, deceased.

BOOKS AND PAMPHLETS RECEIVED. — The Pharmacopœia of the United States of America. Sixth Decennial Revision. By authority of the National Convention for Revising the Pharmacopœia, held at Washington A. D. 1880. New York: William Wood & Company. 1882.

The Medical Record Visiting List or Physician's Diary for 1883. New York: William Wood & Co.

Bacteria and their Presence in Syphilitic Secretions. (From the Clinic of Professor Neumann in Vienna.) By Robert B. Morison, M. D., of Baltimore. (Reprint.)

On the Radical Cure of Hernia by Heaton's Operation. By William T. Bull, M. D. (Reprint.)

Herbert Spencer on American Nervousness. A Scientific Coincidence. By George M. Beard, M. D. New York. 1883.

The Systematic Treatment of Nerve Prostration and Hysteria. By W. S. Playfair, M. D., F. R. C. P. Philadelphia: Henry C. Lea's Son & Co. 1883.

Fifty-seventh Annual Report of the Massachusetts Charitable Eye and Ear Infirmary for the Year 1882. Boston: Alfred Mudge & Son. 1882.

Annual Announcement of the Toledo Medical College. Session of 1883.

Twenty-seventh Annual Report of the Trustees of the State Lunatic Hospital at Northampton for the Year ending September 30, 1882. Boston. 1883.

Address in Surgery. Excisions of Portions of the Alimentary Canal covered with Peritonæum. By William A. Byrd, M. D. Quincy, Ill. (Reprint.)

Abdominal Section in the Treatment of Ulceration and Perforation of the Cæcum and the Appendix Vermiformis. By William A. Byrd, M. D. Illinois. (Reprint.)

A Text-Book of the Diseases of the Ear and Adjacent Organs. By Dr. Adam Politzer, Imperial-Royal Professor of Aural Therapeutics in the University of Vienna, etc. Translated and edited by James Patterson Cassels, M. D., M. R. C. S. Eng., Aural Surgeon to and Lecturer on Aural Surgery at the Glasgow Hospital, etc. With two hundred and fifty-seven Original Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1883.

A System of Human Anatomy, including its Medical and Surgical Relations. By Harrison Allen, M. D., Professor of Physiology in the University of Pennsylvania, etc. Section III. Muscles and Fasciæ. Philadelphia: Henry C. Lea's Son & Co. 1883.

Experience of an Opium Eater during the Withdrawal of the Drug. Recorded by C. H. Hughes, M. D. St. Louis. (Reprint.)

The Rights of the Insane. By C. H. Hughes, M. D. St. Louis. (Reprint.)

The Therapeutic Value of Cephalic and Spinal Electrizations. By C. H. Hughes, M. D. (Reprint.)

A Successful Case of Lumbar Colotomy. By Thomas Bryant, F. R. C. S. (Reprint.)

On Canadian Fresh-Water Polyzoa. By William Osler, M. D. (Reprint.)

On Certain Parasites in the Blood of the Frog. By William Osler, M. D. (Reprint.)

An Investigation into the Parasites in the Pork Supply of Montreal. By William Osler, M. D., M. P. C. P. Lond., and A. W. Clement (Lawrence, Mass.), Student, Montreal Veterinary College. Montreal. 1883.

Original Articles.

TWO CASES OF REMOVAL OF IMMENSE FATTY TUMORS BY ABDOMINAL SECTION.[1]

BY JOHN HOMANS, M. D.,

Surgeon to the Massachusetts General Hospital.

I AM not acquainted with any reports of the removal of fatty tumors from within the abdominal cavity approaching in size those to be described in this paper. Plaster casts of two of them taken by Dr. Whitney, curator of the Warren Museum, have been kindly lent me, and are on the table before you. As I have met with these two, probably other operators of greater experience have met with more. Mr. Cooper Forster showed at the Pathological Society, on the 14th of March, 1868, a monster fatty tumor, weighing fifty-five pounds, removed after death from the abdomen of a woman. This case and an unreported one mentioned to me by Professor Calvin Ellis, of Harvard University, are the only ones I have heard of. Dr. Ellis thought that the one he removed after death might possibly have been successfully removed during life. In the first of these two cases I made an antiseptic exploratory incision and thought that I could not successfully remove the tumor, and in this opinion I was right. The patient recovered so easily and rapidly from this operation, however, that I felt emboldened to make another and more thorough attempt, which, I regret to say, resulted fatally.

CASE I. IMMENSE MYXO-LIPOMATOUS TUMOR WITHIN THE ABDOMEN.

Francis, C. G., a porter, thirty-nine years old, a native of Germany, came to Boston at the age of ten, and has lived here since. In July, 1861, he enlisted in the 20th Massachusetts infantry, and served gallantly through the war. He was for four months a prisoner in Libby prison during the early part of his enlistment, and later lost his left fore-arm at Fredericksburg, in the assault under Burnside; he was never otherwise sick nor injured. After he returned from the war he worked as janitor and porter in a large office building and carried heavy ash-barrels, weighing one hundred and fifty pounds apiece, down five flights of stairs, by swinging the barrel on his back and holding it by the handle with his right hand over his shoulder. He also carried hods of coal up-stairs, and had the care of twenty-five fires during each winter. He gave up his place in 1879, and was afterwards unable to find work that he could do.

During 1879 and 1880 he did not feel strong and was troubled with palpitation, heart-burn, loss of strength and ambition, and more or less loss of mental power. After standing a few minutes he would feel numbness in both thighs as though they were "asleep;" this sensation induced him to sit down, but if he struggled against this desire and walked about the feeling disappeared. Until the summer of 1880 he had had no dyspnœa. He had never had syphilis. He had been in the habit of drinking two glasses of lager beer daily for about eight years, and had smoked tobacco somewhat. He had not slept very well during the year 1880. Two and a half years ago — that is, in 1878, he first noticed that his belly was becoming swollen, but he thought that it was a natural increase of size, and that he was simply growing stout. In the early part of 1880 he began to lose flesh and strength, and became gradually more and more emaciated. He entered the Massachusetts General Hospital in February, 1881, and remained about three weeks. No definite diagnosis was made. The urine was somewhat diminished in amount, but not remarkably so. I saw him in July, 1881. The tumor had grown considerably larger than it was when he left the hospital. His abdominal girth at the umbilical level was forty-two and three fourths inches, and from the ensiform cartilage to the pubes the distance was eighteen inches; from one anterior spinous of the ilium to the other was twenty-two and one fourth inches.

As all of the patient's symptoms could be accounted for by the presence of the abdominal tumor it will be unnecessary to refer particularly to the different organs of the body, except to say that they were essentially healthy as far as could be ascertained. A careful examination of the abdomen was made many times. There was a uniform bulging in every direction, and the distended walls projected somewhat over the thighs. The tumor felt so fluctuating in parts that it was punctured several times, but only a little bloody fluid was obtained. This was examined by Dr. Gannett, and the following is his report: —

6 PARK SQUARE, *Aug.* 3, 1881.

DEAR DR. HOMANS, — The fluid, of a dark-brown color, very opaque, gives slight precipitate with nitric acid. On standing, abundant brown sediment, clear supernatant fluid. Microscopically sediment made up of very numerous fresh red blood corpuscles and a *large* amount finely granular material, wholly soluble in acetic acid. No cells of any sort were found, and nothing to indicate the origin of the fluid. From its solubility in acetic acid, the granular matter is undoubtedly albuminoid. I am unable to make any diagnosis from the few characteristics found in the specimen. Sincerely, W. W. GANNETT.

My diagnosis was "a tumor of unknown character in the abdomen without much adhesion, apparently a large myxoma, or a lipoma, or a colloid growth.

After many examinations and consultations a room was hired in the Carney Hospital, and the patient's board was paid by a subscription of his comrades and friends in the 20th Massachusetts regiment and elsewhere, and on October 30, 1881, I made an incision under the antiseptic spray, about fifteen inches long, from above the umbilicus to the pubes. The tumor, on being exposed, looked like an ordinary fatty tumor. It was smooth and lobulated. It was slightly adherent to the liver, and was covered with a delicate, smooth, envelope looking like peritonæum. It seemed to be about two feet long and a foot thick. The incision enabled me to pull the tumor out of the abdomen considerably, and it was found that the envelope covering it ran down to the spinal column and was then reflected upon the parietes. No intestines were seen. At the lower part there were no adhesions to the bladder, but the tumor seemed to have a central attachment extending from the neighborhood of the cœliac axis downwards and sideways on both side of the vertebral column, covering a space considerably larger than the palm of the whole hand. My explorations were made for the most part on the left side of the abdominal cavity, and after ascertaining with some indefiniteness the attachments of the growth my courage gave out, and I thought it wise to replace the tumor and close the incision. It seemed a shame to shut up this great mass again in the poor fellow's abdomen, but I was afraid that I could not control the hæmorrhage accompanying its removal, and I feared that some of

[1] Read before the Boston Society for Medical Improvement, December 11, 1882.

the abdominal organs, particularly the intestines or a kidney, might be included in the tumor. It was with the greatest difficulty that the tumor was pushed under the abdominal parietes, and behind the pubes, and held there by three strong men while numerous stitches brought the edges of the incision together. Finally fifty-six stitches held the wound firmly, and the tumor remained within the abdominal parietes. The patient recovered completely from this exploratory operation, and showed great strength of constitution. His convalescence was accompanied by much pain and diarrhœa, but the wound healed rapidly and solidly. He returned home at the end of four weeks and gained strength quite fast. He gradually increased his exercise until he began occasionally to come to Boston (from Cambridgeport, where he lived, a distance of about two miles) in the horse-cars. The weight of the tumor annoyed and distressed him, but he found it much easier to carry after his wife had made a stout supporting sling, held up by straps over his shoulders.

As time went on he became anxious to be relieved of his burden in order to be able to work and earn his living. After due consideration and reflection we decided to remove the tumor. Mr. G. said, "My life will not last long with this increasing burden, and if there is such a thing as removing the tumor I wish you would do it. I am not afraid to die, doctor, and it 's neck or nothing this time." From the knowledge obtained at the exploratory operation, and from the endurance the patient had shown, I began to think that perhaps I *could* safely remove the tumor; that perhaps its attachments were not inseparable, and that perhaps I ought to have persevered when I had operated before. Whether our decision was wise or foolish the operation was decided upon. On the 5th of February, 1882, I made another attempt, assisted by Drs. A. T. Cabot, E. G. Cutler, M. H. Richardson, F. C. Watson, Mixter, Russell Sturgis, and Messrs. Sparhawk, Holden, Godding, and several others. Two tumors, weighing with their pails fifty-seven pounds, were removed. An incision about seventeen inches long was made to the left of the scar of the exploratory incision, and a transverse one about four inches long was made on the left side at right angles with the longitudinal one. The large, lobulated, fatty tumors had no anterior adhesions except to the cicatrix of the former incision, but they were adherent to the ascending colon, which crossed them transversely. The tumors seemed to have originated behind the peritonæum on the right side, and had pushed all the bowels towards the left side except the ascending colon. If these tumors had been situated outside the skeleton (that is, outside any of the great cavities of the body) they could have been safely enucleated. They were covered with a capsule, and from this they could be peeled out. The capsule was more or less torn and ruptured, and the tumor raised with great difficulty owing to its weight. The ascending colon was separated from the tumor and rolled off, after dividing and tying most of its mesentery. The vascular attachments were clamped and tied and burnt off from time to time as was necessary, and the tumor was lifted out of the abdomen. When this tumor was removed another one, apparently purely myxomatous, was exposed to view. After some hesitation this was removed also. It occupied the right lumbar and hypochondriac regions, and had pressed the liver upwards and to the left into the epigastrium. The shining capsule (peritonæum) of this tumor was tough and strong; some of it was removed with the growth, and some of it was peeled off and left behind. All bleeding points were secured and the abdomen thoroughly cleaned. Another tumor was now seen, about ten inches long and lying on the abdominal aorta, pulsating with it. This was not disturbed. Everything looked as favorable as one could expect after so severe an operation; there had not been much blood lost; the pulse was 85, and feeble, but not extremely so. Two atomizers had played a spray of a five per cent. solution of carbolic acid upon the abdomen, and the operation had been thoroughly antiseptic. The intestine which had been pushed off the tumor, or rather from under which the tumor had been withdrawn, was largely deprived of its mesentery and might not be well nourished, but with this exception affairs looked as promising as after a severe successful ovariotomy. The patient was placed in bed with his feet elevated and warmed with hot bottles. The operation lasted an hour and a half. During the afternoon (the operation having been finished at half-past twelve) he seemed to be doing well, and at half-past five asked for a drink of water. His wife brought it to him, when he said, "I think I am going," and died.

I append an account of the autopsy and a description of the tumors, by Dr. W. W. Gannett, who has kindly written them out for me.

Autopsy, February 7, 1882, forty-six hours after death. Body medium size, fairly developed, considerably emaciated.

Anterior abdominal walls flaccid, flabby, and thrown into numerous folds. A linear incision from about ten centimetres below xiphoid cartilage to pubes. Short cross incision at umbilicus stitched together. In abdominal cavity about fifty centimetres of bloody fluid. Ascending colon hung free like a rope in the abdominal cavity, having no meso-colon, its usual point of attachment showing a reddened, ragged edge. The whole posterior right wall of the abdominal cavity a ragged, irregular surface (from this the tumors had been removed). On the left side, posteriorly to the peritonæum, was a flattened round mass the size of a man's head showing the same fatty mucous structure as those previously removed. Another mass, about three times the size of the first and of the same structure as the preceding, lay over the inferior vena cava, and was adherent to it and to the duodenum. The right kidney was of the usual size and density and of a pale color. On section it showed a yellowish opacity of the cortex (moderate degree of fatty degeneration). The left kidney was apparently normal. The other organs presented no unusual appearance. The head was not examined. The tumors were retro-peritoneal.

DR. GANNETT'S REPORT OF THE TUMORS REMOVED FEBRUARY 5, 1882.

A. A flattened globular mass measuring $38 \times 33 \times 12$ centimetres, and weighing twenty-five pounds and three quarters. The outer surface showed a shreddy, glistening white surface, from which numerous thin connective tissue layers can be picked off. One portion was hanging loose, and a mass of connective tissue about 20×20 centimetres and about three millimetres thick formed a thick, tough membrane, the under surface of which (corresponding to the tumor) was ragged, the upper smooth and shining. The density of the mass was about that of firm wine jelly. On section the cut surface shows a very delicate pale connective-tissue

meshwork inclosing large spaces which were filled with a thick, syrupy, pale yellow, almost translucent fluid coagulating on the addition of acetic acid.

B. (The scond tumor.) A coarsely irregular mass of pale yellow color and somewhat doughy consistency, measuring $37 \times 31 \times 16$ centimetres, and weighing (with the mass next to be described) twenty-four pounds. On section the surface showed twofold appearances. A homogeneous opaque yellow tissue resembling fat tissue. Imbedded in this were grayish, homogeneous, translucent, soft, gelatinous nodules varying in size from that of a filbert to that of the fist. On scraping the cut surface of the latter a thick, homogeneous, nearly transparent fluid is obtained.

C. A mass similar in character to the last (B), which was torn away from it during the operation of removal, measures $34 \times 17 \times 15$ centimetres, and weighs (with B) twenty-four pounds, and presents the same appearances.

D. Several smaller nodules of a flattened globular form, varying in size from a walnut to a large peach. On section presenting a somewhat translucent yellow, as if made up of a fat tissue rich in connective tissue.

Microscopic examination of gelatinous portions of the above-described tumors (frozen and sections made) showed a stroma made up of very delicate connective tissue fibres running in various directions, and inclosing spaces in which was a clear refractive substance giving a marked mucin reaction. The remaining portion showed the structure of fat tissue.

Case II. On August 8, 1881, I saw Mrs. V., sixty years old. I learned that she had always been well and strong, and had had several children. Her father died at the age of sixty-six of cancer of the rectum, and a brother had died of cancer of the liver. On examination I found a large fluctuating abdominal tumor, without impulse, and containing solid masses. During the previous six months it had grown rapidly. The umbilical girth was forty-one inches. I aspirated the tumor in many places where fluctuation seemed most distinct, but got no fluid, not even blood. I found that the abdominal parietes in the pubic region were œdematous, and that the lower extremities had been so. Her complexion was somewhat sallow, but had formerly been ruddy. The next day I saw her again, and aspirated with quite a good-sized needle, but could get no fluid, though I think that any medical man would have been almost willing to swear that the tumor was a cystic one filled with fluid. On account of the result of my tapping, and because of the family history, I decided not to recommend an operation. Mrs. V. was bright, sagacious, and sensible. I suggested an exploratory incision at some future time, but rather discouraged any interference. At the close of our interview she said, "Will you come to me, and try to remove this tumor, if I send for you?" I promised that I would do so. She went home feeling that if her situation should become very desperate she should insist upon my keeping my promise.

Accordingly, in March, 1882, at her request, I operated at her home. Her size had increased very much, and her umbilical girth was fifty-three inches; the œdema of the abdominal walls was greater, and her lower limbs were much swollen. The tumor was exposed by a long incision, and appeared to be an immense lipoma. It had originated on the right side, behind the peritonæum, and as it grew had pushed the bowels before it, as in the previous case. It was adherent to the peritonæum, from which it was more or less neatly enucleated with free hæmorrhage at times. The ascending colon crossed over it, as in the previous case, and the cæcum, colon, and appendix cæci were almost incorporated in the mass. The tumor dipped deeply into the pelvis, and almost filled it, and was at length, after considerable hæmorrhage and much shock, removed. The operation lasted about an hour, and the tumor weighed thirty-five pounds. Mrs. V. never rallied, and died soon after being placed in bed.

Dr. Gannett reported that the tumor was a pure lipoma.

It seems to me proper and important to put these cases on record. The propriety of operating is, of course, open to discussion. It is very hard, however, to stand by and see persons sink slowly away from mechanical pressure, which you cannot remove by tapping, and make no effort to relieve them, and we are able to do so much now in the way of abdominal surgery that I felt encouraged to make these efforts.

Mr. Cooper Forster showed, March 14, 1868, a monster fatty tumor, removed post mortem from the abdomen of a woman he had been asked to tap. Both Dr. Wilks and Dr. Hicks believed it to be a collection of fluid, the percussion wave being perfect. The ascending colon lay in front of the tumor, and there was a little fluid between it and the walls of the abdomen. It was adherent to the diaphragm, and when removed weighed fifty-five pounds. It had no distinct pedicle, so it was a question how it originated.

The case of Mr. Forster is printed in the *Medical Times and Gazette* for 1868, vol. i., p. 300, and for the reference I am indebted to Dr. Neale's Digest.

It will be seen that these two tumors I have described and the one exhibited by Mr. Cooper Forster were crossed by the ascending colon, and it would seem impossible to remove such tumors without disturbing the vascular connections to such a degree as to cause gangrene. In another case I should be rather inclined to make an artificial anus in the cæcal region, or resect the intestine that had been deprived of its mesentery. The latter procedure would be extremely difficult in the case of the ascending colon, which is much bound down in the right lumbar region. At my request Dr. Gannett has carefully searched all the German, French, and English periodicals and publications, but has not found a single case of retro-peritoneal fatty tumor. Fatty tumors of the omentum and mesentery are not very unfrequently described. Leopold [1] and Kroner [2] have collected seventy-six cases of extirpation of the kidney, but none for fatty or mucous tumors. One of these was a retro-peritoneal fibroma, removed by Billroth.[3] Bruntzel, Breslau, reports [4] an extirpation of the left kidney for a fibroma of the renal capsule, weighing thirty-seven and a half pounds, and followed by recovery, with a fæcal fistula. The patient was an unmarried woman, thirty-three years old. The tumor was of eight years' growth, and painless. Bruntzel's treatment of the wounded and torn peritonæum is interesting and instructive. In removing the tumor (which was retro-peritoneal) the peritoneal sac was twice incised. The two ragged posterior peritoneal surfaces were brought into contact, and the anterior edges were stitched to the anterior abdominal wall in

[1] Archiv für Gynäkologie, xix., Heft 1.
[2] Ibid., vol. xvii.
[3] Wiener Med. Wochenschrift, 1880, No. 28. Reported by Buselman.
[4] In the Berliner klin. Wochenschrift, December 4, 1882, No. 49.

the lower part of the incision, thus providing for drainage from the space between the two folds. The paper is a highly interesting one, and is made clearer by two wood-cuts. The tumor was a fibroma with considerable fat tissue in it.

OCULAR SYMPTOMS AS LOCALIZING SYMPTOMS.[1]

BY S. G. WEBBER, M. D.

THE third case was one of temporary, intermittent paralysis with conjugate deviation. As the symptoms were described to me at first, without seeing the patient, I ventured to guess that it was a case of epilepsy, and suggested the use of bromide of potassium until I could see her a day or two later. This drug did not give relief, and when the patient was seen and carefully questioned and examined, it seemed possible that the symptoms might come from local disturbance of circulation, or that there was some small spot of degeneration.

The result supports the view that the early symptoms were caused by a disturbance of the circulation, continuing only a short time, and that then the blood took again its normal course. The extensive atheroma of the arteries, and the great change in the basilar and its branches, renders such a temporary interruption of the circulation quite probable.

Benjamin Ball [2] reports cases of paralysis which he thinks were due to "contraction of the vessels supplying certain provinces of the encephalon, without structural change, either in the vessels themselves or in those parts of the brain the functions of which were momentarily suspended." He thinks this "spasmodic contraction of the brain vessels may persist for a considerable length of time without producing structural changes in the nervous centres;" and that "the morbid condition may, in certain cases, suddenly disappear, while it is not unreasonable to suppose that the converse may be equally true, and that the symptoms may culminate in rapid or even sudden death."

CASE III. INTERMITTENT LEFT HEMIPLEGIA, WITH CONJUGATE DEVIATION TOWARDS LEFT; DISEASE OF ARTERIES, PLUGGING OF BASILAR; SOFTENING IN PONS AND CEREBELLUM.

Mrs. A., aged about seventy, had been very well all her life, though during three years she had had considerable worry and anxiety as well as grief in the sickness and death of children and husband. Three months before she was seen she was suddenly attacked with flushing of the face and a sensation as if she was about to faint; she sank into a chair; the left arm became powerless, there was a tingling sensation in the hand, and then motion was restored; there was no loss of consciousness. The same day she had another similar, though less severe attack; after that none for several days. They recurred at varying intervals, were lighter, but became more frequent; they had the same characteristics; there was no pain, and no loss of consciousness. After the attack there remained a tingling or numb sensation in the fingers.

There was no paralysis of the leg, simply a slight weakness; once or twice there was tingling in the left leg. Only once was it thought by a daughter that the right side was affected and the left not.

The left side of the face was paralyzed, at least in some of the attacks, the eyelids closed, the left eye turned outwards.

During the attack she could articulate; many of them occurred in the night or early morning, some during the day.

When seen there was nothing abnormal to be noticed in the motions of the eyes, pupils, face, tongue, or hands; she did not walk very firmly, but there was no unsteadiness; sensation was normal; the ophthalmoscope showed no change in the fundus of the eye.

A week later she was worse, had had several severe attacks of paralysis on the left side, then both eyes were turned to the left, the lids were closed most of the time; no observation was made as to whether she could move her eyes to the right. The left hand continued to feel numb all the time, even between the attacks. Once all four limbs were paralyzed, and she was unable to speak; a dose of whiskey seemed to restore motion and speech.

Finally, during Thursday night, she had an attack, the respiration became stertorous, the paralysis varied from side to side, sometimes the right side seemed paralyzed; the eyes did not deviate; Cheyne-Stoke's respiration for twenty-four hours, then it was regular in rhythm, but shallow; the next morning she seemed to recognize some who were about her; Saturday she died.

The autopsy was made three days after death, with the assistance of Dr. Broughton. The skin was very yellow generally. Dura mater was very adherent to the skull; the convolutions of the brain were shrunken, but not more than might be expected; the space left by this shrinking was filled by serum in the meshes of the pia mater, which was not thickened. There was a deeper depression at the upper part of the right anterior central convolution than elsewhere. No adhesions of the pia anywhere. The arteries at the base were very generally atheromatous, but seemingly not more so on one side than the other. The basilar artery, at about its middle, was entirely plugged up by a firm, light-colored clot; there was no coagula either side of this clot, indeed, very few coagula were found anywhere. For one inch in length the basilar artery was very atheromatous, and gave off only small branches, excepting one rather large running to the left, which, however, was nearly closed by the atheromatous thickening of its walls.

Both crura tore easily in taking out the brain, and seemed softened; the upper and anterior portion of the left lobe of the cerebellum was very soft; in the right half of the pons, just anterior to the fifth nerve, and apparently among the pyramidal fibres, was a discolored softened spot. At this point in the pons, and more markedly in the softened tissue of the cerebellum, the microscope showed granular corpuscles about the vessels and in the nervous tissues, also fat corpuscles about the vessels. The crura cerebri were not changed.

The posterior lower portion of the lower lobe of the right lung was dark red, solid, without air, the vessels pervious.

The aortic and mitral valves contained extensive calcareous deposits, the edge of the mitral valve was thickened, and contained a very large amount of this deposit.

The kidneys had thin cortices, the capsules were slightly adherent; post-mortem staining. Spleen small. All other organs normal. The blood was very fluid,

[1] Concluded from page 220.
[2] British Medical Journal, October 30, 1880, page 693.

and there was much post-mortem staining of the viscera.

After hardening the specimens, thin sections were made through the diseased portion of the pons. The hardening was not entirely satisfactory, as the specimen was put into alcohol a little too soon. The spot of softening in the pons (Fig. 4) was about one quarter inch in its longest direction, and about one eighth in transverse direction; it was situated obliquely, near the middle of the right half of the pons, not quite reaching the median line, not implicating the sixth nucleus. On section, parts of the altered tissue fell out, leaving ragged edges. In several spots the blood-vessels were very prominent from the débris having partly fallen away from them. In many places the axis cylinders were enlarged. This softened spot did not extend quite to the point where the fibres of the sixth nerve cross the pons.

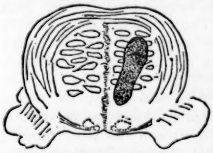


Fig. 4. Showing the size and location of the spot of softening in the Pons. Natural size.

The localizing symptoms were very few; probably had she been seen during one of the attacks more positive symptoms would have been noticed. There was left hemiplegia, with conjugate deviation of the eyes to the left, at least in some of the attacks. This would indicate lesion of the pons, and such a lesion was found. It is not possible to explain the intermittent nature of the symptoms, unless we suppose that at first there was simply a change of blood supply, and when the circulation was restored there was an intermission in the deviation; later the vessels became more occluded, and then the destruction of tissue took place, yet not over an area sufficient to cause permanent deviation; finally the vessels were affected on both sides, and so there was no deviation.

CASE IV. OCCLUSION OF LEFT POSTERIOR CEREBRAL ARTERY; CONGESTION AND SOFTENING OF NUCLEUS OF SPINAL ACCESSORY AND PNEUMOGASTRIC; PARTIAL PARALYSIS OF OCULAR MUSCLES ON THE LEFT; AT LAST CONJUGATE DEVIATION TOWARDS RIGHT.

Annie W., aged seventy, was admitted to the City Hospital December 6, 1881. Her mind seemed clear, but she could not speak above a whisper. Said she could talk aloud one week ago, that she had been sick about ten days. There had been no injury. The mouth was drawn slightly to the left; the tongue was protruded straight; there was less power in the left arm than in the right; there seemed to be less power in the right leg, and sensation was almost wholly lost in that leg; the reflex action was exaggerated in the left foot; striking the bottom of either foot caused severe pain. Incontinence of urine. Slight œdema of ankles and feet.

The next day when seen she could not make herself readily understood. Tickling the eyelids caused reflex action in both lids; both pupils were small, the right smaller than the left; the left lid drooped; motion of the eyes was somewhat restricted towards the left. The tongue was protruded straight. There was little power in moving either hand, attempts at voluntary motion resulting only in tremor; passive motion of right arm showed a contraction of the muscles of that arm, and caused pain; there was no contraction of the left arm; passive motion of right foot also caused pain and a tremor afterwards; no ankle clonus; on irritating soles of feet the left was slightly withdrawn, the right not at all; there was slight hyperæsthesia to pressure over the legs. After being aroused she quickly relapsed into a semi-comatose condition.

The third day the inequality of the pupils was more marked. She could move both hands, the right better than the left; there was still great tremor on making an effort at voluntary motion.

The fourth day it is noted that the eyes could turn to the left, not to the right. The nurse reported spasm of the fingers and disturbance of respiration. In the the afternoon she died.

Autopsy by Drs. Cutler and Gannett. The left posterior cerebral artery was atheromatous from its origin to its junction with the posterior communicating; it was very much smaller than the right, and seemed to be impervious to blood; air could not be blown through it. The left posterior communicating was much larger than the right; all the other arteries of the brain were healthy, and rather full of blood.

The left side of the pons from about midway between the origins of the fifth and seventh nerves was flattened anteriorly as compared with the right side. The left crus cerebri was apparently smaller, and its foot less distinctly striated than the right, and had generally a softer appearance. On section of pons and crura the antero-posterior and lateral diameters on the left side were diminished as compared with the right. All other parts of the brain were normal.

The heart was healthy, and no change could be discovered which was likely to give rise to an embolus. The thoracic aorta contained several atheromatous patches.

No recent disease in lungs or elsewhere in thoracic or abdominal viscera.

After hardening it was seen that the blood-vessels of the medulla, pons, and crura cerebri were unusually full of blood, especially those belonging to the gray substance, so full that even the smallest vessels were distinct as if injected artificially. A portion of the gray substance about the aqueduct of Sylvius was very easily broken down, and good sections could not be made through it. This friable portion did not include much of the nucleus of the third nerve; wherever that could be examined the cells seemed to be normal in character and number. A very few small hæmorrhages were to be seen to one side of the third nucleus or in the tegmentum of the crura.

The region of the sixth nerve and its nucleus showed much injection of the blood-vessels. There was no discoverable change in the nerve cells of the nucleus. Just internal to the left eminentia teres, the descending portion of the facial, was an enlarged blood-vessel, with a greatly dilated perivascular canal. This enlarged vessel was much larger than any usually found in that position, and had pressed the seventh nerve out of place. It commenced a few sections below the nucleus of the sixth nerve, and could be followed for a distance above where all traces of the sixth nucleus were lost. Was this the course taken by the blood in the collateral circulation to supply the plugging of the posterior cerebral?

A hæmorrhage was to be seen in the nucleus of the spinal accessory, and around this the nerve tissue was friable, and sections were more or less irregularly

broken; the hæmorrhage and irregularly-broken masses included on one section at least the whole of both accessory nuclei. The hypoglossal nuclei were seemingly normal.

A section made somewhat higher, so as to include the vagus nucleus (Fig. 5), showed a similar friable



FIG. 5. Showing injection of small vessels in vagus nucleus. At upper part of figure the tissue is softened. At lower part the hypoglossal nucleus is seen in normal condition, magnified eleven diameters, then reduced one-third.

condition for a short distance on each side the median fissure in the floor of the fourth ventricle. There were a very large number of pigmented cells along the borders of the vagus nucleus; such cells are normally found here, and the patient's age may account for the number. The vessels within the limits of the vagus nucleus and along the gray substance lining the floor of the fourth ventricle were very full and prominent. This congestion did not extend into the hypoglossal nucleus. On the left, near the median fissure, blood had escaped from a vessel just under the floor of the fourth ventricle; possibly this was a continuation of the small hæmorrhage seen at a lower level.

A section a short distance above this was normal.

The diagnosis made during life was — lesion involving the nucleus of the left third nerve; probably obstruction of the left posterior cerebral artery. This diagnosis was made from the fact that there was a decided difference in the two eyes. The left eyelid drooped; the left pupil was the larger. My impression is that the restriction of motion was greater than the record implies, and was much more marked with regard to the left eye than the right, and the conjugate deviation towards the right was a later symptom.

It was supposed that the lesion was recent, and was connected with the cause of death. Having no previous knowledge of the patient this was not unreasonable.

The autopsy showed no gross change in any organ as cause of death. The occlusion of the posterior cerebral artery was evidently an old lesion, and probably the ocular symptoms were also of long standing.

The congestion and softening found in the medulla must be considered as the cause of death. The small hæmorrhages may have occurred only towards the close of life. The changes in this region implicated the most vital nerve nuclei, the spinal accessory and pneumogastric.

On the last day of life the respiration was disturbed. The nature of the disturbance was not learned.

The temperature rose almost without interruption till the morning of the day on which she died it was 103.5° F.

There was no definite lesion found to explain the conjugate deviation. Sections were made through the whole of the sixth nucleus, twenty or more, and each one carefully examined. The deviation was probably due to disturbance of blood supply, or to the plugging of some vessels which gave rise to no marked change of structure.

Kahler and Pick report [1] a case somewhat similar to this. There had been ocular symptoms pointing to lesion of the third nerve for several months preceding death. Death resulted from cerebral hæmorrhage in another part of the brain. A spot of softening was found in the right tegmentum implicating the fibres of the third nerve as they passed from their nucleus.

The same authors report [2] another case with left hemiplegia, left facial paralysis, right ptosis, and paralysis of the right rectus superior and inferior; rectus internus only partially paralyzed; pupils normal; there was occlusion of the right posterior cerebral artery.

In connection with the above the following case is of interest, although there was no autopsy. There was some cause of irritation acting upon the nerve tract for the left limbs, the spasm being that which has been named "early contraction." We cannot doubt that the same irritating lesion caused the conjugate deviation to the right; as the limbs were in a state of spasm, we must conclude that the ocular muscles were also in spasm. The contraction of the ocular muscles was relaxed during sleep or coma; it is not stated whether the same was true as to the limbs.

From these symptoms we must conclude that the lesion was in the pons. Its nature is less clear, as the first attack was probably from embolism. It is probable the second arose from embolism also.

When the contraction was diminishing the right eye was directed upward and outward, the left eye was almost straight. The position assumed by the right eye has been referred to a lesion of the middle cerebellar peduncle, especially if the other eye is directed downwards and outwards.

CASE V. RIGHT HEMIPLEGIA AND APHASIA; PARTIAL RECOVERY; PERSISTENT SPASMODIC CONTRACTION OF LEFT LIMBS; CONJUGATE DEVIATION TOWARDS THE RIGHT; DEATH; NO AUTOPSY.

Minnie L., aged thirty-seven, entered hospital November 23d. She had had rheumatism about four years previous; dyspnœa and palpitation on exertion for some time. Three days before admission, on awaking, she could not talk so as to be understood. That afternoon, on trying to rise from a chair, she found that the right arm and leg were paralyzed. She was sure she did not lose consciousness, and that her face was not drawn to one side. She regained partial use of leg and power of speech.

On examination there was seen to be slight paralysis of the right side of the face, tongue was protruded to the right. The upper branch of the seventh was not affected, both eyes closed readily, and the forehead was raised naturally on both sides. There was entire pa-

[1] Arch. f. Psych. u. Nervenk., x., 1880, p. 334.
[2] Zeitschr. f. Heilkunde, ii., 1881, p. 301.

ralysis of the right hand and arm. She could move the right foot, though not so strongly as the left. Reflex actions were retained. Sensation did not seem to be materially impaired in either hands or feet. There was a loud double murmur connected with the aortic sounds, and enlargement of the heart. There were fine râles at the base of the left lung behind.

So far this is a simple case of embolism stopping up probably the left middle cerebral artery. The only other point of interest in the early history is that the evening temperature continued steadily above 101° F. until a week after entrance, November 30th, when it fell to 100° F.; and on December 2d to 99.4° F. It is not unlikely that the pulmonary complication kept this temperature up. She improved, gaining control over the right arm and more motion in the right side of her face.

December 2d. At evening visit she was found by the house officer to have lost the power of speech, the left fore-arm was contracted in flexion on the arm; both eyes were turned to the right. The right arm and leg moved very freely.

December 3d. At the visit she was lying with both eyes closed as if asleep. When the lids were raised there was slight external strabismus of right eye, the left eye being directed forward. When fully roused the conjugate deviation to the right returned with slight nystagmus of a rotatory character. The pupils were about medium size, reacted so little to light it was difficult to decide whether they varied in size or not. Her jaws were firmly closed. The left arm was spasmodically flexed at the elbow, and strongly adducted, and passive motion was resisted. The fingers and hand were kept semi-flexed, but did not resist passive motion. The left leg was extended, passive motion at the knee was less free than on the right. Reflex action was absent on the left, present on the right. Sensation to pinching was retained in the face and hands. She moved the right arm slightly at the elbow during the examination, also the hand and fingers when they were irritated. She answered no questions, but gave response to what was asked by motions. When left to herself she relapsed into a comatose condition, and the eyes took the position noticed at the beginning of the examination.

She became gradually more stupid, could not be induced to take food by the mouth, and was fed per rectum.

December 7th and 8th the contraction of the arm was somewhat less strong, and the conjugate deviation less constant, though returning when she was aroused. During December 12th and 13th there was still less contraction, and she began to take milk by the mouth; on the 14th, taking a pint and half, and on the 15th, a quart. The right eye was then directed upwards and outwards; the left eye slightly inward, almost straight. Contraction of the left arm was much diminished.

December 16th. She took a quart of eggnog and retained two enemata, each consisting of one egg beaten up with pepsin.

December 17th. At 2.45 P. M. she died.

In the first of the above cases the conjugate deviation was towards the paralyzed side away from the lesion, as it should be theoretically. In the second case the same is true as to the conjugate deviation and the lesion, but the paralysis or weakness was exceptionally on the same side with the tumor. The ocular symptom was more trustworthy for localization than the paresis. In the third case both the conjugate deviation and the paralysis were intermittent. If the spot of softening found in the pons can be considered proof of serious disturbance in the circulation of that side before the last days of life, the symptoms in this case also followed the rule. In the fourth case the conjugate deviation was more marked on the day before death than previously; the other ocular symptoms led to a diagnosis which proved correct. At the autopsy the nucleus of the third nerve was cut into so that the microscopic examination was not perfectly satisfactory, as sufficient sections could not be made to be certain of the condition of that nucleus.

Conjugate deviation of the eyes may then, judging from these cases, be regarded as a localizing symptom. When the eyes are turned away from the lesion and towards the hemiplegic side, there is reason to believe the pons is affected; if, however, there is spasm, the eyes will be turned away from the affected limbs if the lesion is in the pons. Bernhardt[1] says that when there is paralysis of the abducens on the same side with tumor, combined with paresis of the opposite internal rectus, not fugitive but persistent, even without paralysis of the facial, it is a *certain* sign for lesion of abducens nucleus on the same side with the paralyzed rectus externus.

Many cases have been collected by Graux, Hunnius, and Bernhardt; experiments have been made by Duval and Laborde, which all show that the above symptom is as constant and safe for localizing as any others.

Wernicke[2] has reported a most interesting observation. There was paralysis of the left facial in all its branches, conjugate deviation of the eyes to the right, sensation was diminished on the right side of the face. There was no paralysis of the limbs as to either sensation or motion. A tumor projected into the fourth ventricle, which extended on the left of the median line from one and one half centimetres above the calamus to one centimetre below the corp. quadrig. The longitudinal fibres of the pons and medulla were not affected. Both third nuclei and right sixth nucleus were not affected. The left sixth nucleus and the left sixth and seventh nerves were diseased. This observation was made before the commissural fibres from the sixth nucleus to the third nerve were established. Wernicke's interpretation of this case was therefore not quite correct. He refers the conjugate deviation to a lesion of a coördinating centre for the third and sixth nerves, which he locates near the nucleus for the sixth.

The symptoms connected with lesion of the nucleus of the third nerve, if carefully observed and rightly interpreted, are also localizing symptoms. The two cases reported by Kahler and Pick are of value as proofs of this. Wernicke[3] has given three cases of hæmorrhage into the gray substance about the third ventricle and the aqueduct of Sylvius, where the ocular symptoms were prominent.

The conclusion must then be formed that the study of the motions of the eye is of great value as aid in localizing the lesion.

It would be easy to extend this paper by considering the value of isolated paralysis of the abducens nerve, and by reports of other cases where there was no autopsy, but this would not be profitable.

[1] Beiträge zur Symptomatologie und Diagnostik der Hirngeschwülste. 1881, page 210.

[2] Ein Fall von Ponserkrankung. Arch. f. Psych. u. Nervenk., vii., 1877, p. 513.

[3] Lehrbuch der Gehirnkrankheiten, ii., p. 233.

ARSENICAL PARALYSIS.[1]

BY CHARLES K. MILLS, M. D.,

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ON November 2, 1882, at Norristown, Pennsylvania, occurred a series of cases of arsenical poisoning almost without parallel. The poisoning was brought about chiefly through eating pumpkin-pie, which it was subsequently proved contained a large amount of arsenious acid. The story of the tragedy does not come within my province in the present paper.

On the 24th of December, 1882, I saw one of these cases at Norristown with Dr. E. M. Corson, the physician in attendance. On the 3d of January, 1883, he was brought to the Philadelphia Orthopædic Hospital and Infirmary for Nervous Diseases, to be under the care of Dr. S. Weir Mitchell. I am indebted to Dr. Mitchell for great courtesy in affording me the opportunity of thoroughly studying the case at the hospital, and now of presenting it to the college.

Dr. G. B. Massey, Electro-Therapeutist and Assistant Physician to the hospital, carefully studied with me the electrical reactions. The results of our examinations will be given at the proper place. Dr. Browning, Resident Physician, also rendered assistance in investigating and recording the case.

H. G., aged twenty-four, single, a lawyer, prior to Thursday, November 2, 1882, was in good health. He was taken sick immediately after rising from the dinner table, having eaten freely of the pie which was subsequently found to contain the poison. He had an attack of vomiting which lasted a few minutes only. He had several similar spells of vomiting during the afternoon, and from Thursday night until Saturday morning the vomiting was almost continuous. It then began to subside, ceasing entirely Monday afternoon, except that at two o'clock Tuesday morning he vomited a dark grumous mass. Just before vomiting this mass he had a sensation of constriction or contraction in the muscles of the chest and throat, and the facial muscles were much contorted. He was not purged at any time; in fact, his bowels were not opened from Thursday, November 2d, until Wednesday, November 8th. During the whole time that the vomiting persisted he had but little pain, scarcely more than would be accounted for by the retching and vomiting. Prostration was very great from the first. Tuesday night, November 7th, he attempted to get out of bed, but fainted, and remained for some time in a semi-conscious state. About this period he began to have marked fever.

On Wednesday, November 8th, and therefore six days after taking the poison, the patient noticed for the first time a sensation of aching and numbness chiefly about the knees. The numbness continued, and, in a few days, extended towards his feet. He still, however, had fair use of his legs, although, of course, they were extremely weak. Three days after the appearance of the numbness in his lower limbs the same sensation began in the fingers of both hands, and soon extended to the wrists, beyond which it never passed. His brain remained unaffected. His legs below the knees were now almost completely paralyzed, and there was some loss of power below the elbows. His face was considerably puffed and swollen.

[1] Read before the College of Physicians of Philadelphia, February 7, 1883.

His general condition and his special symptoms remained as just recorded, without any change worthy of note, until December 1st, four weeks after the ingestion of the arsenic, when he began to suffer great pain. The pains began in the knees, and speedily invaded the legs below the knees, and the feet, progressing in the same course as the numbness had previously taken. Aching was always present, but frequently the pains were boring, tearing, or lancinating. They were accompanied by a sensation like that produced by a strong faradic current. Two days after the coming on of the pain in the legs the fingers and hands also became the seat of aching. In one week the pains began slowly to abate; but throughout December, and, indeed, up to the present time, he has had more or less pain, varying very much in character. By the middle of December the numbness and aching, which had previously been below the knees, had extended above them a distance of several inches. His lower extremities felt as if encased in a cylinder as high as the limits of the numbness. The symptoms in his upper extremities did not change noticeably. The loss of power in the thighs increased with the spreading upwards of the sensory perversion.

I will now give the results of my examinations into the condition of the patient. He was first examined by me December 24, 1882, but the notes here given are from examinations made between January 10 and January 17, 1883, nearly two months and a half after the poisoning.

He presented no brain symptoms, and no disturbances of the special senses of sight, hearing, taste, or smell. He slept fairly well until midnight, and then usually restless and unable to get into a comfortable position. He was much emaciated. Wasting of the limbs was extreme. The following measurements were taken: Circumference of right thigh 11 inches; left thigh 10 3-4 inches; right calf 8 1-4 inches; left calf 8 1-4 inches; right arm 7 inches; left arm 7 inches; right fore-arm 6 1-2 inches; left fore-arm 6 1-4 inches.

Paralysis below the elbows was marked, but not complete. The extensors and supinators were most decidedly affected. The fingers could only be flexed about one half. Movements of the thumbs and the small movements of the fingers were impaired. The loss of power was slightly greater in the right limb than the left. The following were the registerings of the dynamometer: Right hand 35; left hand 35. At both elbows were marked contractures at about right angles. The angles could be reduced to about 160°, but any attempt to carry the straightening further caused pain in the flexor tendons.

Both legs were paralyzed completely below the knees. All movements of the toes and feet were abolished absolutely. The legs in their entirety showed a tendency to rotate outwards, the feet, however, assuming the equino-varus position. Contractures were not present at the knees, but at times the limbs would assume a semiflexed position, these acts of flexure being accompanied by cramp-pains in the flexor muscles of the thighs. He had these jerkings both in the legs and arms not infrequently.

The bowels were very torpid, requiring cathartics. Some dribbling of the urine occurred for a few days in the early part of January, and then passed away. For a few days, also, he had some pain, which he referred to the lower part of the urethra, just as the discharge of urine was completed. At the time of examination,

January 17th, the urine was passed slowly, but without pain. The urine showed an excess of phosphates; but neither albumen nor sugar was present.

Farado-contractility was abolished in all muscles below both knees. Above the knees the extensor and flexor groups and the sartorius were examined, and the faradic reaction was found to be greatly diminished, but not wholly absent. The response was better to nerve than to direct muscular applications. The muscles below the knees would not respond to weak galvanic currents. To currents of medium strength they responded, but not normally.

The reactions were those of degeneration. Anodal closing gave the strongest reaction; cathodal closure came next. Slight contractions followed both anodal and cathodal opening. The contractions were at first sluggish, though vigorous, increasing after a few trials, and then quickly exhausting. The reactions expressed in the German formula were —

AnSZ″; KaSZ; AnOZ; KaOz.

In both upper extremities farado-contractility was decreased, but not lost; the diminution was much greater below than above the elbows. Below the elbows the faradic excitability was rapidly exhausted. To the galvanic current the reactions of degeneration were present, but not so decidedly as in the legs. Anodal closing gave stronger reaction than cathodal. With moderately strong currents tetany was produced at the anode. Both patellar reflexes were abolished.

The cremaster-reflex was studied, and presented some interesting points. The retraction of the testicle, known as the cremaster-reflex, which has been thoroughly discussed by Dr. S. Wier Mitchell,[1] can usually be awakened by irritation of a certain definite region of the thigh extending from the groin nearly to the knee. In young lads, as Dr. Mitchell has shown, this reflex is easily caused by touching or pinching the whole thigh, with the exception of a band of skin which nearly always may be represented as forming the postero-lateral third of the circumference of the thigh. Sometimes, however, the cremaster-reflex region is far less and sometimes far more extensive. It rarely extends below the knees, although, as stated by Dr. Mitchell, it may in the healthy boy include a large part of the calf of the leg. In adults the excitor region is often much restricted, and it may even be absent.

Gentle irritation of the skin of the inner aspect of the right thigh and leg of the patient, as far down as the malleolus, caused very vigorous retraction of the right testicle. Sometimes, but not usually, both testicles were retracted. Similar irritation of the left thigh and leg led to movement of the left testicle, which was marked, but not as vigorous as that exhibited by the right from irritation of the right limb. Now and then, in making this test, the unilateral movement of the left testicle, from irritation of the left thigh and leg, was followed a moment later by an imperfect retraction of the testicle of the opposite side. A similar effect was not produced in any of my examinations by irritation applied to the right limb; neither did excitation of one side cause motion in the other side only.

Dr. Mitchell says: "As a rule, which has infrequent exceptions, irritation of one side produces unilateral movement of the testicle of the same side. There are two forms of violation of this law. In the first, irritation of one thigh causes motion of the testicle of the same side, and also, a moment later, less complete action of the testicle of the opposite side. In the other case, touching or pinching certain parts of the inner and usually of the lower half of the thigh causes reflex cremaster motion on the other side only; while like irritation in other parts higher up give rises only to unilateral activity on the same side."

[1] Journal of Nervous and Mental Disease, October, 1879.

On admission the surface temperature of each calf was 95° F. He usually complained of his legs feeling to him unduly warm.

Late in November transverse white bands were observed across the finger nails about two lines from their posterior limits. The nails were not furrowed, but simply showed white markings. As the nails have slowly grown these lines have remained.

The fingers and fore-arms were hyperæsthetic, but at the same time the patient could not determine with any accuracy as to one or two points on testing him with the æsthesiometer. A similar condition, but more marked, was present in the feet, legs, and as high as the middle of the thighs. The muscles were very sensitive. Applications of hot and cold water were discriminated readily.

I will give the record of pulse, respiration, and temperature, for two weeks from January 9th to 23d.

	Pulse.		Respiration.		Temperature.	
	Morning.	Evening.	Morning.	Evening.	Morning.	Evening.
Jan. 9	—	107	—	23	—	99° F.
Jan. 10	134	140	24	24	98.4° F.	99.2
Jan. 11	134	134	24	24	98.6	98.6
Jan. 12	136	132	24	24	98.8	99.1
Jan. 13	140	128	28	24	98.6	98.8
Jan. 14	140	138	24	28	99.8	98.8
Jan. 15	—	140	—	24	—	98.4
Jan. 16	136	128	24	24	99	98.8
Jan. 17	148	128	24	28	98.8	99.6
Jan. 18	136	124	24	24	99	99.8
Jan. 19	132	116	24	20	98.4	98.6
Jan. 20	124	116	24	24	98.6	98.6
Jan. 21	120	116	24	24	97.8	98.6
Jan. 22	128	120	24	24	98	98.8
Jan. 23	124	136	24	25	99	99.4

The pulse, therefore, during the time of these observations, ranged between 107 and 148, and was nearly always more rapid in the morning than in the evening. The respirations ranged between 20 and 24, standing usually at about 24. The temperature ranged between 97.8° F. and 99.8° F., but commonly was not much either way from the normal.

On admission to the hospital the following treatment was instituted by Dr. Mitchell: Applications of ice and hot water alternately were made three times daily for ten minutes at a time to his arms and legs from the elbows and knees downward. Surface massage with cocoa-nut oil was used once daily. Ice bags were applied to the spine for one to two hours twice daily. One grain of the extract of ergot of the new United States Pharmacopœia was given every two hours, and this was rapidly increased until thirty grains daily were administered. After continuing the use of the ergot for a week the patient's stomach became disordered, and tincture of belladonna in doses of five drops every three hours was substituted. Fifteen grains of chloral were administered occasionally, and sulphate of morphia, at first one twenty-fifth grain, and eventually increased to one sixteenth grain, was ordered to relieve pain when necessary. He was placed on the ordinary full diet of the hospital, with the addition of milk three times daily, and beef tea twice daily.

I made an examination of the patient to note the effects of treatment to-day (February 7th). He has improved steadily day by day. His general strength has increased. He has regained almost entirely the use of the muscles above the knees. He has also much better use of his fore-arms and hands, particularly the latter, being now able to pick up small objects. The "wrist-drop" has improved greatly. He has much less pain, aching, and numbness below the knees; the legs below the knees, however, still remain paralyzed, but are not so completely helpless. He has every appearance of progressing steadily to recovery.

(To be continued.)

REPORT IN MATERIA MEDICA AND PHARMACY.

BY WM. P. BOLLES, M. D.

ACONITE.

THE *Aconitine* literature has been very largely augmented within the past few years, and the subject has been taken up before in these reports, especially with reference to the admirable researches of Messrs. Wright and Luff, in England, upon aconite root.

But the occurrence of a case of accidental poisoning in Winschoten, Holland, caused by the substitution of a *French* nitrate of aconitine for the *German* one intended by the physician, in a dose warranted by the Dutch pharmacopœia for the latter, brought up anew the great difference in strength of the various respectable "aconitines" in the market, and induced the authorities to employ Profs. Plugge and Huisinga to examine several samples and answer the following questions: (1.) What is the difference in their action upon animals? (2.) What is the difference in their action upon man? (3.) What is a poisonous dose of each for animals and man? One of these samples was the fatal mixture with which it is not necessary to concern ourselves, further than to say that it was prepared from "*Aconitin Nitric*," made by *Petit*, in Paris, which itself was the next sample.

This consisted of hard, white crystals, soluble with difficulty in cold water. The authors prepared a solution of one fifth of one per cent., and injected it subcutaneously to prevent loss by vomiting. From the second specimen, "Aconitin Nitric, von E. Merck, a yellowish-brown powder, easily soluble in cold water," they prepared a one per cent. solution as they expected to use larger doses, and administered it in the same way. The third specimen was labeled "Aconitin Nitric von Friedlander, in Berlin," but proved to be made for him by Trommsdorf. Of this they also made a one per cent. solution. It was an agglutinated, hard, gummy mass, of a grayish-white color, very easily soluble in cold water.

Their experiments were made in a similar way with all the different samples, and on the same species of animals, namely, frogs, rabbits, dogs, and pigeons, excepting in the case of the Trommsdorf Aconitine, when lack of material made them unable to experiment upon dogs. The symptoms in all the trials were carefully noted, and described with much detail, but do not differ from the previously recorded signs of aconite poisoning. They observed that the effects of Merck's and Petit's aconitines were the same in kind, but different in intensity, while the action of Friedlander's (Trommsdorf's) appeared to affect the heart less in proportion to its other effects, but the difference was not great.

A table accompanies their paper, in which the doses — proportionate doses per kilogramme — and the result are systematically recorded. Their conclusions are: (1.) "Petit's nitrate of aconitine acts at least *eight times* stronger than Merck's, and is *one hundred and seventy or more times as poisonous as Friedlander's.* (2.) That Merck's Aconitin Nit. is *twenty to thirty times as active as Friedlander's*, and that there is a certain difference in the kind of action, as well as in the intensity, between the two former and the latter. No wonder that they continue, "Since the poisonous strength of the substances sold in the shops under the same name differs so frightfully, the greatest care should be exercised in prescribing aconitine or its salts, since, after the physician has become acquainted with the action of a maximum dose of a certain preparation by experience, there is the dangerous possibility that, by a new purchase, a supply of a *very different strength* may be obtained, the same quantity of which may prove fatal to his patient."

Such was the case of Winschoten, where the dose was within the official limits of the Dutch pharmacopœia.[1]

The article has been reproduced in part in the *Pharmaceutical Journal and Transactions of England* and in *New Remedies*, — the Lamson murder in England serving to keep the subject of aconitine somewhat prominent in the first part of last year.

In addition, there are at least three other important aconitines in the English and American markets of dangerously if not equally varying activities.[2]

First the Aconitia of the British Pharmacopœia, of United States 1870, and the French Codex. A white or yellowish-white amorphous powder, whose authorized dose is from half to one milligramme. Secondly, "Aconitia," made in part or wholly from the Indian or Japanese and other Eastern aconites, and consisting of or containing pseudoaconitia or other alkaloids thought to be more poisonous than aconitia. Thirdly, the "Crystallized Aconitine" of Duquesnel, the most energetic preparation ever used in medicine, whose dose is one fifth to one third of a milligramme.

[Squibb, who has examined this, says it is a nitrate of aconitine twenty per cent. pure.— *Ephemeris.*]

This latter salt has been in use but a short time and that, too, only sparingly, and in the larger cities its high price and great power preventing its general adoption, but it has so far proved to be reasonably uniform in its strength.

In the same line of inquiry is a paper by Messrs. E. L. Cleaver and M. W. Williams before the Pharmaceutical Society (England). They had observed that some specimens of even British aconite extract did not give a tingling sensation to the tongue, and knowing that it was sometimes prepared from *A. paniculatum* in part they procured some authentic extract made from this species as well as some from *A. napellus*, which they examined; that of *A. napellus* was tingling; that of *A. paniculatum* not at all so. Then they examined the fresh herb of *A. paniculatum* without finding any aconitine therein. They did find an alkaloid, however, which was bitter but not pungent, and probably may be picro-aconitine of Groues. (*A. paniculata* was at one time official both in London and Dublin.)

[1] Archiv der Pharmacie, 1882.

[2] See also Dr. Squibb's Ephemeris, not accessible to the reporter until after this report went to the press.

The following extract from an account by Mr Holmes of a visit to an extensive herb garden in Lincolnshire, read before a previous meeting of the same Society, explains the importance of the above examination: "Aconite," — two species of this plant are grown to meet the requirements of buyers: *A. napellus*, yielding an extract which is not perfectly smooth unless made so artificially, while *A. paniculatum* yields one which gives more satisfaction on account of its being more easily worked and presenting a smoother appearance and less resinous character. The former plant flowers in May or June, and the latter from the middle of August to the middle of September, when *A. napellus* has scattered its seeds, and its leaves are turning yellow."

Mr. Muney stated in the same body that probably at least eighty per cent. of the aconite roots now in use were not *aconitum napellus* at all, but were from a different species grown in Japan.

Finally the following paragraph from *New Remedies*, on the different yields of aconitine according to different processes, will serve at least to keep up the complexity of the subject: —

"Mr. Schneider tried different processes to ascertain the comparative yield of alkaloid: The process of the British Pharmacopœia yielded only 0.002 per cent. or one part of alkaloid from fifty thousand parts of aconite. Morton's process gave 0.127 per cent. of a light yellow powder. Hirzel's process yielded 0.0046 per cent. Wittstein's process gave 0.14 per cent. in well-formed, isolated, six-sided tablets. Hottot and Liégois' process yielded 0.296 per cent. of crystals. Duquesnel's process gave 0.239 per cent. of well-developed crystals.

The above note was translated from an article in the *Archiv der Pharmacie*, and contains references to the sources from which the processes are obtained.

It is found, even by the most careful observers, to be no easy problem to judge of the value or even variety of aconite root by simple inspection. The genus Aconitum is a large and widely distributed one, and its species often run very close to each other. More than this, *A. napellus*, the officinal species, grows wild in Europe, Asia, and parts of North America, and either in cultivation or naturally has developed numerous varieties, not all of which contain an appreciable amount of aconitine. De Candolle enumerates twenty-nine, and other observers have placed more than twice as many forms under the specific name *A. napellus*. The roots, too, are very variable, even when of the medicinal species and variety, and of good quality, while those of allied species may resemble them very closely and yet contain little or no aconitine. Mr. E. M. Holmes, in a communication to the British Pharmaceutical Conference, from which the above is in part condensed, after examining (by taste) a number of specimens found that all the inert roots were of later blooming varieties than the typical *A. napellus*. He stated that the German drug was carelessly gathered and ought not to be trusted, and recommends that the British Pharmacopœia require home-grown plants, "*flowering in May and June*," and does not see why any chemist who has a small piece of garden should not grow his own aconite root.

This extreme uncertainty as to the strength of aconitine as prepared by different chemists led the Pharmacopœial Committee to omit it altogether from the officinal list, and prevents many physicians from prescribing a medicine that may be either absolutely inert or fatal in the same dose, according as the druggist may have this or that maker's article in stock. It was suggested in the *Lancet* that the prescriber always write B. P. (British Pharmacopœia) after the name in his prescription, and this course is approved by the editor of the *Pharmaceutical Journal*, but the British Pharmacopœia aconite extract, as actually found in England, appears to be as variable as the aconitines. In the United States we have now no standard aconitine, and for most purposes it may be best to use the Galenical preparations of aconite of the Pharmacopœia (*tincture, extract, fluid extract*, and the new *abstract*; the tincture is a little weaker than before). If, however, it is desired to have the alkaloid it would appear to be safest to order the strongest, — Duquesnel's crystallized,— and make the dose proportionately small. The apothecary, on the other hand, should *never* put up Duquesnel's unless the prescription called especially for it, and then not if the dose did not show that the physician was aware of the intensity of its action.

THE CHEMISTRY OF PODOPHYLLUM.

Dr. V. Podwissotzki has contributed a series of papers upon this subject to the *Pharm. Zeitschrift für Russland*, which have been translated in an abridged form and reprinted in the *American Journal of Pharmacy* by Mr. Fred. B. Power.

According to the author the active constituent of podophyllum, and also of "podophyllin," is a resinous substance, *podophyllotoxin*, consisting of a resinous acid, *picropodophyllinic* acid, which is without action on the animal organism, and an active neutral body, *picropodophyllin*

Podophyllotoxin, which may be regarded as a purified resin of podophyllum, is a very bitter, amorphous white, or slightly yellowish-white, powder. It is permanent, has a slightly acid reaction, is soluble in chloroform, dilute alcohol, and hot water. From the latter it is precipitated very slowly upon cooling, in the form of fine flakes.

If it is neutralized in its aqueous solution, or in solution in diluted alcohol with alkalies it is decomposed, one portion remaining in solution and the other crystallizing out in microscopic needles. The latter is the cathartic principle, picropodophyllin. This can be obtained in colorless, extremely delicate silky crystals, which aggregate upon drying to felt-like, shining, silky masses, soluble in chloroform, ether, and ninety per cent. alcohol, but almost insoluble in more diluted spirit; also soluble in hot fatty oils, from which it crystallizes out upon cooling, and in glacial acetic acid. It is completely insoluble in water, and may be instantly precipitated from alcoholic solutions by its addition. Taste extremely bitter. Although, according to the author, it is the only active principle of podophyllum, its extreme insolubility makes it almost or quite inert, unless given in conditions specially calculated to insure its solution. Thus injected subcutaneously it crystallizes in the tissues, and produces absolutely no effect. It is readily and naturally soluble in picropodophyllinic acid, which is the other component of the podophyllotoxin above mentioned.

This is a resinous acid, obtained in flocculent masses, soluble in alcohol, chloroform, ether, and hot water, from which latter it separates on cooling. It forms neutral salts with alkaline and earthy bases, some of

which are gelatinous in solution, and upon dessication, horn-like. Ammonia finally decomposes it. It is entirely inert, medically speaking, of itself, and would be without importance were it not for the fact that it serves to render the extremely insoluble picropodophyllin capable of being absorbed and consequently active.

The natural compound of these two can be practically isolated from the other ingredients of podophyllin, and is a more uniform and desirable medicine than any other preparation yet made of podophyllum. The dose suggested is from .015 to .03, not exceeding .04. Alkalies should not be given with podophyllotoxin or any preparation of podophyllum, unless as an antidote to an overdose.

Podophylloquersetin is a coloring matter present in podophyllin, whose action is neither emetic nor cathartic, but which appeared in the author's physiological experiments to be the griping element of the crude drug. The separation of this from the above-described substances must be therefore very desirable. *Podophyllinic acid*, fatty substances, and extractive matters of no action upon the body, were also examined. No berberine or other alkaloid was found.

KOLA NUTS.

MM. Heckel and Schlagdenhauffen find that these seeds contain free caffeine in a proportion exceeding that contained in coffee. Besides this they contain theobromine, some fatty matter, much glucose, and a very large proportion of starch. The presence and quantity of these constituents indicate the value these seeds are likely to attain as an article of diet. — *Year Book of Pharmacy.*

OIL OF ANDA-ASSU.

This is obtained from a large Brazilian tree belonging to the order Euphorbiaceæ, the same order in which the croton and castor-oil plants are found. The seeds are about as large as a small plum, have an agreeable nutty flavor, and have long been used in Brazil as a cathartic in doses of two or three. The oil can be obtained in abundance, is used in lamps and by painters. It is a cathartic milder than the crushed seeds (the same is true of castor oil), but efficient in doses of about forty drops. Its taste is at first somewhat nauseating, afterwards sweetish.

Not long ago Dr. Joao Manuel de Castro studied the effects of the oil very closely, and arrived at the following results: —

(1.) Oil of anda-assu may be administered in doses of ten grammes at a time without producing vomiting.

(2.) The purgative effect appears two or three hours after taking the oil.

(3.) There are usually three or four evacuations after the dose.

(4.) No intestinal irritation follows the use of the oil.

(5.) It may be employed in all cases where castor-oil would be used.

(6.) It has the following advantages over castor oil: it produces the same degree of effect with a smaller dose, and it has not the repulsive odor of castor oil.

Other authorities also regard it as a great advantage that it is much more fluid, and therefore does not adhere so much to the palate. Besides, the seed of anda-assu is very abundant in Brazil, and it furnishes a great deal of oil (about fourteen per cent.). In larger doses than ten grains it acts as a drastic cathartic, and may produce griping and vomiting. The fact that it is a rapidly drying oil may prevent its ever taking the universal place of the long used and much abused oil of Ricinus in family medicine closets, as it will be likely to become thick and gummy. It might be conveniently given in capsules.

USTILAGO MAYDIS.

This newly-officinal substance has been in very moderate demand for the past few years as a substitute for ergot. No thoroughly satisfactory analysis has yet been made of it, but one exhibiting a good deal of care and of considerable interest appeared in the Report of the United States Commissioner of Agriculture, 1880, from Mr. Henry B. Parsons. According to his investigations there is a moderate similarity between its ingredients and some of those contained in ergot of rye, but the constituents of both, particularly those of ustilago, will have to be more completely isolated and tested before their identity can be proved. From Mr. Parsons's analysis the following appear to be the most important constituents: (1.) A fatty oil, of an orange-yellow color, peculiar odor, and acrid taste. It is freely soluble in ether, moderately so in alcohol, and is apparently a glycerine ether. It resembles the oil of ergot, but is found in much smaller quantity (4.2 per cent.). (2.) A volatile alkaline substance having a peculiar musty or fish-like odor, not giving the reactions for the alkaloids and in too small quantities for further examination. (3.) An indifferent bland-tasting organic substance, extracted by means of eighty per cent. alcohol, partially soluble in water and easily decomposable. (4.) Five and a half per cent. of what the writer says "resembles the sclerotic acid found by Dragendorff in ergot," — an amorphous red-brown, tasteless powder. In addition to these he enumerates numerous of the common constituents of plants.

BERBERIS AQUIFOLIUM.

The same gentleman has written in the same volume an article upon the above drug, used to some extent in the West, chiefly as a tonic and febrifuge. Its alkaloids are berberine and oxyacanthine, the same as those of common barberry-root, and there is no reason to expect any more from the new than from the older species of berberis. There are also starch, wax, gum, sugar, resin, and a "black substance," but none of these are of therapeutic value. There is no need of any new source of berberine, which is an alkaloid, the bitterness of whose salts is out of proportion to their tonic qualities.

— There was an unpleasant suggestiveness in the inadvertence of a practitioner who signed his own name in the space on a death certificate appropriated to the "cause of death." The registrar said he wished he could be as sure of the correctness of all the diagnoses.

— Dr. Bischoff has published in Bonn, in 1880, a work on the weight of the human brain. His conclusions are based upon 906 autopsies; 559 on men and 347 on women between the ages of fifteen and eighty years. In general his conclusions, both of a positive and negative character, agree with those previously reached by the best observers, as stated in our late editorial article.

Hospital Practice and Clinical Memoranda.

CHILDREN'S HOSPITAL.

CASES IN THE SERVICE OF DR. A. T. CABOT.

REPORTED BY H. S. OTIS, HOUSE PHYSICIAN.

CARIES OF THE ANKLE.

Case I. Julia D., aged five, entered the hospital May 26, 1881.

In July, 1880, she had been treated in the out-patient department for a suppurating gland at the elbow, with enlarged axillary glands.

In January, 1881, the left ankle became swollen, painful, and red. Stiff bandages were applied, but with little benefit, as her mother allowed her to continue walking. She was not seen for some time, and then appeared with the ankle much as before, but with an opening under the internal malleolus.

June 6th Dr. Bradford etherized the girl, enlarged the opening beneath the malleolus, and found that the abscess extended across to the outer side of the ankle. He made a counter-opening just under and posterior to the external malleolus, and passed a seton through just behind the joint.

At first the ankle improved decidedly, and the child was soon sent to the Convalescent Hospital at Wellesley, with a stiff bandage and a simple dressing over the wound. While out there she had the whooping-cough, and when recovering from this went home.

Late in October she again appeared at the hospital, with the ankle more swollen and inflamed than ever.

November 12 she was etherized, and Dr. Cabot made an incision about three inches long on each side of the ankle, and increased the opening on the inner side by a short incision running forwards at right angles with the preceding. The astragalus, which was wholly carious, was removed entire, the lower ends of the tibia and fibula were sawn off, and carious portions of the scaphoid and cuboid bones were removed with the bone-spoon. The wound was packed with marine lint filled with iodoform powder and covered with a Lister dressing, the whole being rendered immovable by an anterior plaster splint.

As the cavity contracted, a simple seton covered with iodoform was passed through the joint, which rapidly closed down upon it till January 8th, when it was removed. The sinuses discharged slightly for some time, and the ankle, if used, became swollen, but this soon subsided under a plaster bandage, and April 1st she was discharged well.

Case II. Eddie W., aged three, entered the hospital September 17, 1881.

No history could be obtained, but the child was pale, emaciated, with sore eyes and mouth, and with one ankle swollen, red, and very tender.

September 24th, Dr. Cabot incised an abscess over the inner side of the ankle, and the joint being found diseased on September 26th, he etherized the child, and with the bone-spoon removed what carious bone could be felt. This made a considerable opening through the tarsus, and making a counter-opening he passed a seton, covered with iodoform, through the joint. A Lister dressing was applied, and an anterior plaster splint for immobility. The sinus rapidly closed down upon the seton, which was removed about the middle of October, and the openings were closed November 5th. The child now acquired whooping-cough, but kept up, and was constantly running about the ward.

Early in December the ankle again became swollen and red, and although put at once into a stiff bandage the sinus reopened. As the little fellow could not be kept quiet, but was constantly up on his feet, the swelling gradually increased till March 16th, when Dr. Langmaid etherized the child, reopened the incisions on the sides of the foot, scraped the bone where it was rough, and put a seton soaked in balsam of Peru through the tarsus.

May 3d the sinus had again closed. A plaster bandage was applied to the ankle. From this time the foot was kept in a stiff bandage till late in September, when, everything seeming solidly healed, he was allowed to use his foot freely without support.

Case III. Maggie M., aged five, entered the hospital October 29, 1881, with an abscess on the inner side of the ankle. This was opened by Dr. Cabot, and the inside thoroughly scraped out with a spoon. No carious bone was found. For a time this seemed to do well, but on her getting up became again aggravated.

March 16th Dr. Langmaid etherized, opened up the old abscess cavity, and scraped out some unhealthy granulation tissue. For a time the foot improved, but then again relapsed.

May 3d she was etherized, and Dr. Cabot made an incision on the inner side of the ankle. The sinus was now found to lead down to carious bone, which was thoroughly scraped out. It could not be determined exactly which bones were affected, but when the carious portion was removed it left a hole directly through the tarsus large enough to admit the fore-finger. An iodoform seton was passed through, and the foot done up in a Lister dressing, with an anterior plaster splint. Everything went along smoothly, and July 26th the seton was finally removed, the wound closing August 1st. A plaster-of-Paris bandage was now applied, and continued till the middle of the autumn, when she had a strong, useful, and movable joint.

In these cases the repair went on very satisfactorily under the use of iodoform, introduced through the joint with setons. The immobility of the joints obtained by the use of plaster splints seemed to do much to hasten the healing.

Case II. illustrates very well the importance of maintaining immobility of these joints for a considerable period after the soft parts are thoroughly healed. Although this child's foot was seemingly well, and free from any pain or swelling, yet when allowed to go about on it, the disease was quickly reawakened. It seems best to continue the support of a stiff bandage for some weeks after the sinuses are closed.

TORTICOLLIS. FORCIBLE CORRECTION.

Minnie N., aged six years, entered the hospital September 16, 1880.

Her parents first noticed a stiffness of the neck three and a half years ago; this gradually increased, and the head was slowly drawn over to the left side. They think that for the past two years it has been stationary in its present position.

During this period the child has had two attacks of partial paralysis.

The present condition is accurately represented in Fig. 1.[1]

The contraction is mostly confined to the posterior muscles of the neck, and the head is drawn down so firmly that the ear and mastoid process rest upon the acromion. The child walks very insecurely, and is much fatigued by any exercise.



FIG. 1.

September 28th Dr. Cabot etherized the child, and by the exercise of a very moderate degree of force brought the head into a straight position.

The skin upon the contracted side had shrunk so during the long malposition that it tore somewhat before the head came straight. With the aid of Dr. Bradford, who assisted in the operation, a plaster bandage was then applied, enveloping the chest and head (as described by M. Delore). This set quickly and maintained the corrected position.

This plaster casque was worn until October 23d, when it was removed, and a wire splint applied similar to one used by Dr. Buckminster Brown at the Samaritan Hospital. The child rapidly gained strength and security in walking.

She was discharged from the hospital January 12, 1881. After this she attended regularly as an outpatient. Although the head kept perfectly in position and the muscles of the neck became soft and flexible, still the child was uncomfortable if the head support was left off. The neck was constantly examined for evidence of caries, but no abnormal appearance could be detected until some time in the spring of 1881, when a slight prominence of the sixth cervical vertebra was noticed. This was never so marked as to be unmistakable evidence of caries; but, taken together with the long-continued weakness of the neck, made the existence of caries a matter of strong probability.



FIG. 2.

January 16, 1883. Her father says that her head is perfectly straight, and that she goes much of the time without the wire support, still, however, using it occasionally. Her general health has improved greatly, and she joins the other children in coasting and such out-of-door sports.

— According to the *Lancet* the number of years that a student has to spend at a medical institution prior to being admitted to examination for a medical degree, in various countries, is as follows: Sweden, ten; Norway, eight; Denmark, six and seven; Belgium, Holland, Italy, and Switzerland, six; Russia, Portugal, Austria, and Hungary five; France, England, and Canada, four; United States, three or two; Spain two.

[1] The cuts, being taken from daguerreotypes, are reversed.

Reports of Societies.

GYNÆCOLOGICAL SOCIETY OF BOSTON.

HENRY M. FIELD, M. D., SECRETARY.

STATED MEETING, FIRST THURSDAY IN MAY, 1882.

WM. G. WHEELER, M. D., President, in the chair.

SEPTICÆMIA IN WOMEN.

W. S. THOM, M. D., read a carefully prepared paper introductory to the subject of discussion before the Society. This affection has been recognized as a disease — as, indeed, gynæcology has received recognition as a department of medicine — only within recent years. Neither was known forty years ago, at least to the general profession. Septicæmia is a form of blood-poisoning, in which it is supposed the lymphatics play a chief part in the absorption and conveyance of the septic matter. Abscess, so common in pyæmia, rarely occurs in uncomplicated septicæmia. Its main characteristics are insensibility to pain, a degree of stupor, high temperature, very dry tongue, weak, rapid pulse, and a peculiar mawkish sweetness of the breath. It may be discussed as (1) puerperal and (2) non-puerperal. The puerperal state predisposes to septic absorption. Slight laceration at any point in the parturient canal, retention of débris in the uterus, the open mouths of the sinuses at the placental site on occasion of relaxation, the shock to the solar plexus and the cardiac, all combine to favor absorption. If there is decayed matter present the absorbents are ready to take it up.

The disease may be communicated in two principal ways: either from without, as by the fingers or the instruments of the physician, or by auto-inoculation at any point where there may be lesion. Indeed, the system may be inoculated through the sound mucous membrane under conditions of lessened blood-pressure or nervous shock. The mysterious cases in which putrid placenta is retained, with attendant foul lochial discharge, in which still the subject escapes septic absorption, may be explained either because of absence of solution of continuity or because the tears have been first healed to such extent as to be invested with a glaze of granulations unfavorable to absorption.

The reader further gave the notes of a case of septicæmia which had occurred in his own experience. Source of infection obscure, unless it be referred to inefficient nursing and filth of surroundings. Treatment consisted of thorough washing out of the vagina three times a day, which always gave relief, and opium in small doses, often repeated; would now superadd bleeding from the arm, in erect position, till patient fainted. Hesitated to attend his next obstetric case, but Dr. Stevens, who had seen the case just reported in consultation, overcame his scruples. The case came off in seven days, was a difficult primiparous birth, requiring instrumental interference; but patient made a good recovery, as did other puerperal cases following. The reader hereupon detailed the precautions which should be taken by the accoucheur under these circumstances.

Non-puerperal septicæmia may occur after any operation performed upon the pelvic or abdominal organs. Details of an illustrative case in the writer's experience were given. The noteworthy fact was remarked of the very rare occurrence of septicæmia after operation

for cancer of the uterus. This, at least, was true of the reader's observation. This immunity may be attributed to the free use of the actual cautery; but the suspicion was hazarded that the pathological process tends to cut off the absorbents; and so, if contiguous parts are kept clean, there should be little liability to septicæmia.

As to treatment, it is all expressed in efficient disinfection, and for this permanganate of potassa was preferred in solution of strength which shall display the color of port wine; should always be used warm, and sometimes as hot as can be borne. Proof of purity of the parts is afforded by the stream ceasing to return decolorized. For a statement of the anatomical changes caused by septicæmia and pyæmia reference was made to a recent paper published by Dr. E. G. Cutler in the Transactions of the Medico-Legal Society of Massachusetts, vol. i., No. 2.

The following note was communicated from the practice of Dr. Harlow, of Woburn: Two patients delivered in the same day, with one of whom the birth was accomplished before the arrival of the doctor, not so much as a vaginal examination being made. Septicæmia followed in both. The doctor had a case of erysipelas under his care at the time, but whether the poisoning resulted from contagion conveyed by himself is a difficult point to settle. At all events the care of either erysipelas or scarlet fever should preclude contemporaneous attendance on a midwifery case.

The Chair remarked he had recently had three cases of septicæmia under observation, and was made to realize afresh how inadequate are all the resources of the profession in contending against this most malignant disease.

Dr. A. P. Weeks presented condensed memoranda bearing upon the present discussion. Mathews, Duncan, Taylor, etc., believe in the non-identity of the poisons of erysipelas or of scarlatina and of puerperal fever. Macdonald thinks there is no more risk, provided disinfection be employed, in the obstetrician attending upon puerperal fever than in the surgeon's caring for a case of erysipelas. Churchill subscribes to a similar opinion. Robert Bruce had thirty-six cases out of an obstetric clientèle of 3500, covering a period of twenty years, these being variously assigned, as to cause, to variola, adherent placenta, etc., etc. George Hunter reports six cases in seventy-six, of which four were fatal. He believes in the identity of the poisons of puerperal fever and erysipelas; also advises thorough disinfection, inunction of the hands with carbolized oil, etc. The disease followed him even after a period of respite.

Dr. Fritsch, of Halle, subscribes to the opinion, commonly held in Germany, that there is no such thing as puerperal fever in the old sense of specific disease. Several factors may unite to invite the disease, namely, change in the blood, from extensive retrogressive metamorphosis, septic infection at some point of lesion in the parturient canal, etc. Montgomery considers the cervix to be the locus of absorption of septic matter, which he generally found inflamed. Barker admits auto-infection, but does not consider traumatism an essential condition. Has an ingenious theory for the increase of temperature. The disease is rarely ushered in by a chill; pain is generally absent; it is seldom found to be uncomplicated; there will be associated metritis or peritonitis. A remarkable change in the blood is to be observed, which becomes dark and fluid. Does not believe in an attempt to eliminate; enjoins intra-uterine injections, absolute cleanliness, sustaining treatment; gives potass. chlorate, fifteen to twenty grains, every three hours.

Pyæmia is to be distinguished by repeated chills, inflammation of certain joints, which disappears rapidly, and as rapidly passes to other joints. Septicæmia begins early, by third or fourth day, pyæmia later, that is, at the end of a week. Septicæmia presents delirium early; in pyæmia we do not get delirium.

Dr. Atthill records five cases of puerperal fever following upon the admission of a case of erysipelas to the Rotunda Hospital. Dr. Lüke, of Plön, reports puerperal fever in a woman who had erysipelas of the face when delivered. Two more cases, rapid and fatal, followed in the same ward. Trousseau regards puerperal fever as a rare disease, declaring it to be an essential fever; phlebitis and purulent absorption are not all that are necessary to produce it. Epidemic puerperal fever is recognized, but in any case there must be a wound which acts as the determining cause. Purulent infection originates in the veins nearest the seat of lesion. Believes in critical discharges, and that cure may be obtained by means of them.

Dr. Weeks thus summarized his own views: "Pus makes pus, and putridity putridity. Serosity is the element of pus which plays the efficient rôle in absorption. Treatment: quinia, sudorifics, purgatives, support, stimulants." He cited a case of his own, which, upon autopsy, showed no lesions except a slight inflammation of cardiac extremity of stomach. Patient had been to a funeral in New Hampshire; the body, which was exposed, had been too long kept. Was taken with labor pains soon after return, initiated with vomiting of blood, and complicated by a convulsion. Upon this soon supervened a condition marked by all the signs of puerperal septicæmia. In another case autopsy declared various foci of pus, justifying the diagnosis of pyæmia. Here infection was due to the carelessness of the nurse. A case may commence as septicæmia, and afterwards, from the septic condition of the blood, pass into pyæmia.

Dr. Warner recalled a case of mumps in a female patient, forty-seven years of age. She seemed to be recovering, and swelling had nearly disappeared, when she apparently caught cold, and grew very sick. Then saw her in consultation; high fever, dry tongue, coated and spotted. Swelling in the region of the ovaries, and thence extending and involving entire abdominal cavity. Suggested treatment as for septicæmia, namely, quinia in large doses, and iron given freely. There was speedily a favorable response, and remedies were discontinued. Hereupon patient suffered a relapse, with temperature at 106°. Resumed quinia, eight grains every four hours, and iron in large doses; patient soon convalescent.

Dr. Clarke inquired if pain is characteristic of septicæmia.

Reply: rather the opposite. We generally find insensibility to pain, as to all other stimulants, physical and psychical. This confirmed the doctor's experience; had had a number of cases, but they seldom complained of pain.

The Chair suggested if peritonitis complicated the case there would probably be pain. The early training a man has in the profession, he continued, follows him through life. One educated in the prevailing opinion of forty years ago finds it hard to accept all

the refinements introduced by the pathology of to-day. We must believe with Barker, that there is something more than a local cause for the disease under discussion; but what this cause is, our crucibles and our investigations with the microscope fail to discover. We think we owe everything to our quinine or to antiseptics, on account of some past success; we then encounter a hard case and find ourselves powerless, and our vaunted remedies vain. Pathology tells us that typhoid fever is a disease of Peyer's patches; but, for successful treatment, typhoid fever and puerperal fever must be studied clinically. The mild and tractable case of septicæmia, and that which overwhelms from the first, and kills in one or two days, may be caused by the same poison, and present similar morbid anatomy; but, clinically, they are different diseases. Rushton Parker considers puerperal fever allied to putrescent anæmia. He draws a picture of the terrible affection when it attacks immediately after labor, and destroys life within forty-eight hours. Rigors, sweats, suppression of lochia and of lactation, if it had commenced, — constituting, in a word, a living death, masked by continuance of circulation and respiration.

As respects treatment, Dr. Wheeler would hesitate to employ the massive doses of quinia familiar to those who had practiced in the West and South, and perhaps unavoidable there. How is the already intolerant stomach to bear so large quantities of an offensive and irritating remedy? The doctor also pictured the inherent difficulties of this medication in a severe and yet protracted case, wherein is not alone irritability of the stomach, but of the entire alimentary canal. Here we are thrown back, practically, upon the power the patient has, constitutionally, to stand up under disease, and upon antiseptic injections. And for this, the speaker would prefer carbolic acid to the permanganate of potassa.

DR. WARNER replied to the objection raised respecting quinine, that the quinine ought to be given before there was reached such a condition as that portrayed.

DR. MARCY remarked that, while he would give due weight to the criticisms of the Chair, still it must be remembered that the medicine and surgery of the present day are undergoing a marvelous change. Dr. Thom had given the best subdivision; that is septicæmia where the absorption takes place through the lymphatics, and that is pyæmia where the septic matter uses the blood-vessels as its avenue into the system. What is it that is absorbed? We are not fully prepared to say. In many cases it is a germ from without, which rapidly reproduces its kind, once it has gained its place in the interior of the body. It would seem the purpose these germs are designed to subserve, in the economy of Providence, is the rapid destruction of dead matter; but, unfortunately, they may attack and bring mischief to living matter also. Reference was made to Ambrose L. Ranney's monograph on septicæmia and pyæmia as giving an admirable tabulation of the various sources of infection. The speaker proceeded to show, by means of a diagram on the board, the manner in which bacteria begin their work. "Sanitary Science and Surgery," — this was to be the medicine of the twentieth century, in the words of a European correspondent. The labors of Dr. Martin, and those similarly engaged, have already shown how much can be accomplished for prophylaxis and prevention in one department; Charcot's efforts to prevent disease by inoculation of the lower animals, etc., were also instanced.

DR. CLARKE believed that germs, otherwise harmless, if inoculated in a fruitful soil, may produce results which otherwise had not appeared. Thus, in a given case, the bias, the proclivity to septicæmia, is already in the system; nothing further is required but the essential germ to call it forth into active manifestation.

DR. MARTIN declared he belonged to the same class in practice as the Chair, but he was impelled to say that the investigations respecting germs were of the utmost importance. Jenner discovered that if a person passed through a certain disease he is henceforth wholly insusceptible to an epidemic of the same. This was all Jenner said, and he was always careful to say no more than he saw and knew. The profession had gone farther, had reasoned from fact to theory, and had stated as positive fact and as actually observed what properly does not lie outside the domain of supposition. Jenner saw no change in virus at twenty removes, and he hoped there was none. The profession have said there was no change, and have had already to take the back track. Bock's paper is a simple *reductio ad absurdum*. Pasteur's discovery is all-important, but arguments from analogy based upon it will surely carry the profession along the same wild path it has so often traveled before, and end, as upon many other occasions, only in ridicule.

DR. WEEKS cited the opinion of the school who declare that septicæmia does not depend upon bacteria or upon any germ, but is due to chemical change; and if there be organisms present, these are the product of such change, and bear the relation to the disease of effect and not of cause. As respects treatment, the main dependence must be upon thorough washing out of the uterus with antiseptic douches, and upon systematic support by means of quinine, iron, stimulants, etc. The heart is weakened and requires digitalis rather than aconite. If all the diseases of this class depend upon bacteria, and are to be referred to the one poison, we may expect to meet them with the one remedy, namely, carbolic acid. But clinical observation brings us to very different conclusions, and he who would contend successfully against septic diseases must have a broad and varied armamentarium.

The CHAIR introduced to the Society Dr. Chapin, of Lincoln, Neb., formerly of the Massachusetts Medical Society. This gentleman stated that rheumatism would not let him live in Massachusetts, but he had wholly escaped his old enemy by removing to Nebraska. His present home was not a malarious region, and disease requires but little quinine. In the treatment of puerperal fever he chiefly depended upon calomel and opium, and cited several cases with satisfactory results.

VACCINE VIRUS.

An allusion by Dr. Chapin to his difficulty in getting pure and efficient animal virus called up DR. MARTIN, who made startling statements concerning the traffic in that commodity. Material which ought to be thrown away — the débris of crusts, epithelium, etc., — is mixed with glycerine to form a paste. This costs almost nothing, and sells at an immense profit. The virus used at Thomasville Ga., affords a case in point. It cost but a cent per patient, and the public vaccination was intrusted to a "*cancer doctor*." Horrible results followed, the "virus" took so thoroughly that the victims had to go bed; extensive axillary abscesses, in some cases, were but a small part of the mischief.

Such practice, in this and other instances, has brought reproach upon animal virus which it can hardly stand up against. The doctor proceeded earnestly to assert the duties of the profession in this particular: the physician should always get his virus direct from the producer and hold him responsible for results.

CONCLUSIONS OF THE DISCUSSION.

DR. STORER briefly summarized the conclusions of the discussion, placing upon the board a prospectus of the therapeusis of septicæmia; (1.) Cleanliness on the part of the medical attendant. (2.) Cleanliness of the patient. (3.) Cleanliness of the surroundings. As illustrative of the third condition, Dr. Pinkham, of Lynn, had traced a case of septicæmia to a faulty drain. Allusion was made to a recent paper by Dr. Stanberg, U. S. A., Contribution to the Study of Bacteria commonly found on Mucous Membranes of Healthy Persons. Reference was also made to a paper by Dr. Cotting, for which he had been criticised, but which the speaker highly commended, — Disease and Death a Part of the Plan of Creation.

A gentleman present remarked the comparative infrequency of septicæmia in hot weather, when the windows are kept open; believed the disease may be reduced to a minimum by free ventilation.

DR. MARCY rejoined that antiseptic treatment, after all, resolves itself into cleanliness.

VACCINATION DURING PREGNANCY.

DR. MARTIN showed a specimen of a fœtus which had contracted vaccinia in utero from the mother. Illustrates Dr. Meigs's statement that "vaccination during pregnancy is murderous."

W. C. Hunt, M. D., of Newtonville, was elected to active membership, and E. Geron, M. D., of Poughkeepsie, and A. G. Kimball, M. D., of Jackson, Mich., respectively, to corresponding membership. Adjourned.

Recent Literature.

The Systematic Treatment of Nerve Prostration and Hysteria. By W. S. PLAYFAIR, M. D., F. R. C. P. Philadelphia: Henry C. Lea's Son & Co. 1883. 111 pages.

This is a reprint of two papers originally printed in the *Lancet*, and an address to the British Medical Association. The object of the papers is to call attention of English physicians to Dr. Mitchell's method of seclusion, rest, and diet, with massage, etc., in treating certain forms of nervous prostration. He says, in conclusion, that the chief value of this systematic treatment is that it appeals not to one but many influences of a curative character. He is thoroughly convinced that very few cases of hysteria can be preached into health; that very few hysterical women are conscious impostors. He gives full credit to Mitchell for bringing these various agencies into harmonious action for the cure of such patients.

— A writer in the *Medical and Surgical Reporter*, February 17th, claims excellent results in obstinate vomiting of pregnancy from the free administration, as a nutriment, of pop-corn, prepared in the customary manner, and simply salted.

Medical and Surgical Journal.

THURSDAY, MARCH 15, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY, No. 4 PARK STREET, BOSTON, MASS.

WATER POLLUTION AND CHEMICAL ANALYSIS.

IN an editorial last week on the report of the Boston Water Commission, in the course of some comments on what might be expected from chemical analyses of water, and the possibility of dangerous contamination by minute quantities of typhoid excrement whose presence could not be detected, we said: "Chemistry seems to have done nearly as much for us already as can be anticipated from it in this direction; . . . it may tell us when there is danger, but cannot assure us of safety."

Since the above was written we have been favored with the supplement to the Eleventh Annual Report of the Local Government Board, containing the Report of the Medical Officer for 1881.[1] Among the valuable papers published therein is a report by Dr. R. Cory on the evidences which chemistry can give as to the presence of certain pollutions of water where such pollutions have been purposely made. His results are extremely apropos to the Boston water supply from Lake Cochituate.

A given amount of water, say a gallon, was intentionally polluted by a given amount of human excremental matter, say a grain, from a healthy or from a typhoidal subject.

As was to be expected, there was to the customary chemical examinations nothing to distinguish typhoid pollution from any other excremental pollution. But from the further analyses the danger of very minute quantities of specific pollution may be forcibly deduced, and the almost inappreciable effect upon the water in parts of albuminoid ammonia is plainly shown. Water purposely polluted with enteric fever stool in the proportion of a grain to the gallon showed a resulting increment of albuminoid ammonia (on an average of experiments) amounting to $\frac{1}{1000}$ (.0010) in the gallon, or what is the same thing to $\frac{14}{1000}$ (.014) of a part per million parts. A particular sample of water purposely contaminated with the filtrate from 3.5 grains of fever stool to the gallon was submitted, along with a specimen of the water not thus contaminated, to Mr. Wanklyn, the chemist, by whom the albuminoid ammonia process has been developed. The increase resulting from this pollution proved to be .020 part per million for the 3.5 grains, or .0057 part per million for each grain of the contaminating stool added to the gallon of water.

[1] London, 1882.

Dr. Buchanan, Medical Officer of Health, makes a practical application of this result, choosing for this purpose the well-known and carefully investigated typhoid epidemic at Caterham, caused by the discharge of the typhoid stools of a workman into the source of the town's water supply. Two hundred attacks of typhoid fever were traced, upon evidence that did not admit of question, to the use throughout a particular fortnight of water that had been pumped from a well, in which a man having enteric fever had been at work, and which he had defiled with his stools. During that fortnight 1,861,000 gallons of water were pumped from the well. If the water for the whole fortnight had contained one grain of excremental matter per gallon, this would have meant that nineteen pounds of excrement had been added to each day's supply of water. Such an amount of excrement was of course not evacuated, nor can one suppose that every gallon of water received precisely the same amount of contaminating matter. But, Dr. Buchanan points out, this serves to show that one grain to the gallon means a very large amount of polluting matter present in water. He goes on to say: "In Dr. Cory's experiments we see a water thus largely befouled by a most dangerous material; and the indications of that befoulment, when expressed by the chemist, in terms of albuminoid ammonia, is the figure .014 part per million parts of the water. Wherefore, it is not permissible to accept the doctrines which have been formulated from the amount of albuminoid ammonia present in an otherwise unknown water." Water yielding from .00 up to .5 parts of albuminoid ammonia, per million, is placed chemically by Messrs. Wanklyn and Chapman, among waters of "extraordinary organic purity;" yet, as Dr. Cory shows, the pollution of a gallon of water by all the soluble and finer particulate matter from 3.5 grains of typhoid stool, is represented in Mr. Wanklyn's own hands, by no greater increment than 0.02 part of albuminoid ammonia per million of water.

From other analyses Dr. Cory finds that equal amounts of albuminoid ammonia may be furnished by extremely different quantities of nitrogenous polluting material, and this is the case even though the polluting substances differ no more *inter se* than one typhoid stool differs from another typhoid stool. When a typhoid stool is compared with a healthy stool obtained under somewhat similar conditions of diet, water polluted with the latter yields to this process (that of Messrs. Wanklyn and Chapman) a larger amount of albuminoid ammonia than water polluted by the same quantity of typhoid stool.

Dr. Buchanan sums up his comments on Dr. Cory's investigations by stating that "the chemist can, in brief, tell us of impurity and hazard, but not of purity and safety. For information about these we must, with the aid of what the chemist has been able to teach us, go outside the laboratory in search of the conditions surrounding water sources and affecting water services."

In other words, the inhabitant of Boston must go to Pegan Brook.

MEDICAL LEGISLATION IN PENNSYLVANIA.

There are two bills now before the Legislature of Pennsylvania that especially interest the profession, — a new anatomy act and an act regulating the admission of persons into insane hospitals and creating a board of supervision. The anatomy act of 1866 had for its objects legalization of dissecting and the prevention of traffic in cadavers; it applied only to the counties of Philadelphia and Allegheny. The present proposed bill requires the appointment of a board of distribution, consisting of professors and teachers of anatomy and operative surgery in the several medical and dental colleges, with representatives from unincorporated schools of anatomy and practical surgery. Public officers having control over unclaimed human bodies shall deliver them to this board, who shall justly apportion them among the several institutions entitled to them by law. The distinctive features of this bill are the creation of a board of distribution, the obligation laid upon public officers to deliver such unclaimed bodies under a penalty of from $100 to $500 for neglect or refusal to do so; and, finally, it is hoped that it will extend over the entire State.

The bill proposed by the very able special commissioners appointed last spring by the Governor to inquire into the treatment of the insane, is one which has excited much comment, and appears to be vigorously opposed by the management of the several insane hospitals. The bill creates a central board, to have supervision over places where insane persons are under treatment, said board to be composed of the Board of Public Charities and three additional members, appointed by the Governor, one of whom shall be a member of the bar, and another a physician, both of ten years' standing and practice. In consultation with the Chief Justice of the Supreme Court and the Attorney-General, the Committee on Lunacy is to act as a licensing board. All pay places where insane patients are treated must take out license under regulations prescribed by this committee for the conduct and control of such establishments. The committee have power to enforce their regulations by suspending the license upon disregard of their rules, and such withdrawal of license lays the offending parties open to a charge of misdemeanor, and any institution of the kind that fails to take out a license commits a misdemeanor. Actions for damages can also be brought against them. Medical records and "case-books" are to be kept in such establishments, with weekly and other periodic records and notes, thus preventing inmates of long standing from being sight of.

An important section of the bill is that which requires one notice of the fact to be mailed to the Committee of Lunacy and another to the Secretary of the Board of Visitors for the county within forty-eight hours after the admission of a patient into any such establishment. The committing physicians must be medical practitioners of five years' practice, and their certificate must be given within a week of the commitment. A medical practitioner, chosen by the patient or his family, and with the sanction of a judge

of a court of record, shall have access to and visit the said "lunatic" at reasonable hours. Boards of Visitors for each county are to be appointed by the Committee of Lunacy to act in conjunction with them. Women may serve on these boards. Every institution in the State that comes under the provision of this law is to be visited once a month by a county visitor or committee member, once in six months by a committee of three, one of whom must be of the Committee of Lunacy, and once a year by a majority of the committee. Any such institution that does not take out a license, or fails to comply with its provisions, is liable to the charge of misdemeanor. The act deals also with the criminal insane, and provides that such persons, when pronounced cured, shall be turned over to a place of custody and not discharged upon the community without legal release. The release of the Committee of Lunacy for all other cured cases is to be equivalent to, and in the absence of release by the superintendents of such asylums, a sufficient discharge.

There are two features in this bill that are supposed to be especially distasteful to insane asylum management: (1) making them responsible to a central board which has the power to confer or revoke a license, without which they may not admit patients, and (2) the power conferred upon this committee to examine records and dismiss patients, and have a supervision over the institution generally. It is believed, however, that this bill, which has been very carefully prepared, will be passed substantially in the form presented, perhaps with one or two minor alterations.

Some individuals are also urging a bill for the regulation of vivisection, and it is probable that a conference will be held with some prominent physicians, and something submitted of this kind at the present session of the Legislature. It is not believed that it will interfere materially with original research, which is just beginning to earn for Philadelphia some new laurels as a medical centre.

AMATEUR THERAPEUTICS.

FEW men are willing to admit that there is any department of human knowledge of which they are quite ignorant. Like Mr. Brooke, in Middlemarch, they have at some time "looked into" every subject that can be mentioned in their hearing; and the positiveness of their opinions reveals no doubt in their own minds that they have seen to the bottom of whatever they have looked into. Few fields are more attractive to "look into" than medicine, and the multiplicity of prescriptions that are offered by friends to any one who is indisposed is a matter of universal observation. Indeed, it is the neighbors and friends of the amateur therapeutist who have to bear the peril of the latter's well-meant but dangerous interest. To take calomel and paregoric out of the hands of the officious old ladies and to direct their whole therapeutic efforts through the channel of sugar of milk is a positive boon to imperiled humanity.

Unfortunately, some of these amateur marksmen (to change the figure) do not fire with blank cartridges, whence come unfortunate results. The Rev. Mr. Timins, vicar of West Malling, England, stands committed for trial on the charge of manslaughter for having caused the death of a young girl, aged seventeen, the daughter of a laboring man in his parish, by administering oil of bitter almonds. The girl was found ill by the vicar, and although medical aid might have been had without difficulty the clergyman fell a victim to what may be called the *cacoëthes præscribendi*, and sent for this drug, which, as he afterwards testified before the coroner, he had frequently used without ill effects. The defense at the inquest was that the death was due to apoplexy, in spite of the fact that an autopsy clearly showed death to have been caused by prussic acid. At the second judicial examination this theory was abandoned, and it was claimed to be simply a case of accidental homicide. Dr. Bristowe testified that Mr. Timins, who was a fellow-student with him, had always showed an interest in the science of medicine, and had been frequently invited by Dr. Bristowe to visit with him the latter's patients in St. Thomas's Hospital. The magistrates, however, decided to let the case go a step further, and committed the clergyman for trial at the Kent Assizes. Of course it is to be expected that the good character and benevolent career of the defendant will prevent an adverse verdict being ultimately rendered, but the authorities seem disposed to make the matter of sufficient prominence to serve as a warning.

Almost coincidently with this event, we learn of a Belgian priest who performed the Cæsarean section under circumstances, however, quite different from those which tempted the English vicar to try his medical skill. A lady was seen by the priest, in his opinion *in articulo mortis*, and who was far advanced in pregnancy. He opened the abdomen and extracted twins, the woman, however, dying during the operation. In the ensuing investigation the priest testified that he made an attempt to find a physician or a midwife before operating, and offered as his defense the urgency of the case and the impossibility of procuring medical aid. The priest has been exonerated in three successive examinations, after each of which the public prosecutor has appealed, and that official now proposes to carry it before the *cour de cassation*, the ultimate tribunal.

If we may judge from the decisions thus far rendered, these two cases may be taken to illustrate the difference between an officious assumption of duties that should be left to others and a reluctant acceptance of a heavy responsibility thrown unavoidably upon one. It is the difference between the physician who draws up a will at the request of a dying patient when legal advice is inaccessible and the man who under no such stress of emergency goes out of his way to usurp legal functions, his bungling discharge of which may cause miserable disaster.

MEDICAL NOTES.

— The relation of quackery to science is exemplified in other fields beside that of medicine. Meteorology, a science of recent development, has ascertained certain laws controlling natural phenomena. The result of the application of these principles in the departments established by the American and English governments has been the attainment of a fair degree of success in predicting weather changes for a few hours in advance. Such bureaus, controlled by educated men and aided by a system of obtaining data which could be gained in no other way than by government agency, possess all that is really known of the art of weather prognosis. Yet these results, meagre as they are in scope, have been of great value to commercial interests. Now, despite the evidence of these men that in the present state of science no valid prediction as to atmospheric changes can be made for more than forty-eight hours in advance, the quacks come to the front and issue their prospectus for the whole year at once. They have no special education, no opportunities for collecting data, no principles of reasoning which they are willing to promulgate, yet they publish the productions of their "natural and intuitional powers" with the utmost boldness. The extravagance of their pretensions gains them a better hearing than is given to the modest claims of the scientific man. The daily papers, almost without exception, throw open their news columns to promulgating the humbug, even if they occasionally discredit it editorially. Of course the prophets know enough to make their predictions in accordance with what is antecedently probable, and their words are sufficiently sibylline to admit of an *ex post facto* reconciliation with almost any occurrences. Even a literal fulfillment would be no evidence whatever of the value of their work, because such fulfillment would be much more explainable on the ground of coincidence than as the result of a method which is so perfectly unscientific.

As with other species of quackery, so here, notoriety and money are the stakes played for by the operators, and harm and loss are the portion of the public. During the past week the prediction by a Canadian soothsayer of a severe storm to occur at this time has paralyzed the entire fishing interest of New England and Canada, owing to the apprehension thus aroused in the always superstitious sailor. One of the wharves in this city was reported as lined with fishing-boats three deep, the men refusing to put to sea till the storm should have come and gone, while a veritable "fish-famine" prevails in Nova Scotia and the cities fed from that centre. In New York alone the damage to shipping interests has been estimated (?) at a million dollars. In all such disturbances of trad of course the mercantile sharks do not fail to make considerable prey. Meantime, wharf proprietors are notifying their customers that they will not be responsible for the safety of property, and the weak-minded and nervous everywhere are prostrated with apprehension, and all because people who ought to know better have stopped to listen to the maunderings of an ignorant pretender. Verily, medicine is not the only field offered the quack, and his work bears the same fruit in every soil.

— In a discussion of the Obstetrical Society of Philadelphia, relative to the effect of the operation for restoring lacerated cervix in causing sterility, Dr. Goodell expressed the opinion that it does have such an influence, mentioning that he has operated in 169 cases and has only known of seven who have since become pregnant. Other speakers, including the reader of the essay under discussion, held a contrary view; one reporting three of his own patients who had been operated upon by Dr. Goodell, and all of whom had since become pregnant.

NEW YORK.

— Several members of the family of a German cabinet maker on First Avenue have recently recovered from trichinosis. The family consists of the husband, his wife, and four children, the oldest of whom is eight years old. On the evening of February 16th they ate some raw ham. The younger children partook principally of the fat, while the lean meat was eaten by the father, mother, and oldest child. The father continued during the next four or five days to eat the ham in sandwiches, which he took with him to his work. On the 19th the mother was taken ill, on the 20th the oldest child, and on the 21st the father, and the physician who was called in found that they were all suffering from the symptoms of trichinosis. Some of the ham was afterwards examined by Dr. Janeway and other competent microscopists, but no trichinæ were found, though they thought that the meat nearer the bone had no doubt contained them in small quantities. It is probable that the fact that the trichinæ were not numerous accounts for the escape of all the patients.

— A young Englishman, a deck hand on a steamer plying between the city and Bedloe's Island, died on March 4th from swallowing a drachm or more of fluid extract of gelseminum, which he took in mistake for fluid extract of gentian. About a year ago he broke his leg, and was treated at the Marine Hospital on the island, and when he became convalescent he was appointed an assistant in the hospital pharmacy. After he became deck hand on the steamer he was still allowed to visit the pharmacy from time to time without the usual physician's permit, as he was supposed to be sufficiently familiar with drugs to avoid making mistakes in regard to them, and it was he himself that poured out the fatal dose.

— On the 1st of March a trifling fire occurred in ward 7 of Bellevue Hospital, which was occupied at the time by sixteen convalescent surgical patients, all of whom were promptly removed. The fire, which originated under the flooring, near one of the steam radiators, was extinguished by means of a patent apparatus kept on the premises, and the services of the fire department were not required.

— The coroner's jury investigating the deaths of the sixteen children killed in the recent panic in the Roman Catholic parochial school on Fourth Street found in their verdict that the building where the dis-

aster occurred was insufficient to accommodate seven hundred children, which was the average attendance in the school, and that the stairways of the building were unsafe. They recommended that frequent and systematic alarm exercises should be had in all schools, and in order to enable the superintendents of different schools to avail themselves of all the experience in the matter, they called the attention of the Board of Education to the expediency of appointing a competent person to superintend the false alarm drills, whose duty it should be to visit, on the request of the principals of either private, parochial, or society schools, their respective institutions, and to instruct the teachers, as well as the pupils, in all the necessary exercises and preparations to prevent panics from whatever cause.

— The Board of Health has just won a case in the Superior Court against the builder of a tenement-house on First Avenue, who filed a plan for the construction of a building five stories high, the specifications of which stated that the lot was twenty-five by one hundred feet, that the size of the proposed house was not to be more than twenty-five by sixty feet, and that no additional structure would be added to the premises. The Board found that the above requirements of the Tenement-House Act were afterwards being violated by the proprietor.

— During the week ending March 3d three cases of small-pox were reported, against one the week previous. On the 5th of March there died of small-pox, at the Riverside Hospital, a man by the name of Fowler, who had claimed to be able to cure the disease by means of mesmerism.

— Mrs. Burnell, a dwarf, upon whom the Cæsarean section had been successfully performed, recently died at the age of twenty-seven. She was born at Richmond, Vermont, and her mother was a woman of ordinary size, while her father was only thirty-nine inches in height. Until within a few days of her death she was on exhibition at Bunnell's Museum with her little boy, who was announced on the bills as "the child that never was born."

— The degree of D. D. S. was conferred upon thirty graduates at the Commencement of the New York College of Dentistry, which was held at Chickering Hall on the 6th of March. On the same evening the fifth annual Commencement of the notorious "United States Medical Colleges" was held at Steinway Hall, when, among the other degrees conferred, was the extraordinary one of "doctor of anthropology," which was graciously bestowed upon Andrew Jackson Davis, the lecturer on spiritualism.

— The Metropolitan Throat Hospital has purchased a new building in West Thirty-Fourth Street, between Eighth and Ninth Avenues.

PHILADELPHIA.

— The Polyclinic will open April 15th. The building at Thirteenth and Locust Streets, leased for its purposes, is being rapidly altered, and the new signs are already attracting attention.

— The commencements of the medical schools are later this year than ever. Jefferson will have its commencement April 2d, Professor DaCosta delivering the valedictory. The University of Pennsylvania will not have its commencement until April 20th.

— A complimentary dinner was recently given by the old medical officers of the Pennsylvania Hospital to the faithful steward, Mr. William G. Malin, who, at the age of seventy-eight years, retires from his duties as superintendent of the department for the sick, having served the hospital continuously for fifty-nine years. The dinner was given February 21st, and was attended by nearly ninety subscribers; a large oil paint-ng of the honored guest was presented to the hospital.

Correspondence.

LETTER FROM BERLIN.

RESECTION OF THE LUNG AS PROPOSED BY DR. BLOCK.

Mr. Editor, — The subject of operating on the heart seems to have excited some interest in America of late, and a recent writer in the Journal (January 25th) in an article on Heart Puncture and Heart Suture, speaks of the experiments of Dr. Block,[1] as pointing the way to a new freedom in this direction. The experiments alluded to consist principally in operations on hearts of rabbits, and are considered as even more important than the researches in regard to heart puncture. The writer of the article regrets that he has been unable to consult Dr. Block's original memoir, but hopes at a future time to do so, as well as to report further investigations on the subject. This article leads me to think that the present communication may not be without interest, although it concerns operations on the lungs rather than on the heart.

In June, 1882, Dr. Block came to the laboratory of Professor Virchow, where I was working at the time, to exhibit specimens of intrathoracic surgery. The specimens shown were principally limited to rabbits, but the operator stated that he had shown that in cows, swine, and dogs, as well as in rabbits, the various lobes of the lungs could be removed quickly, easily, and safely through incisions in the intercostal spaces without cutting ribs or costal cartilages, and was so confident that similar operations could be performed successfully on man, that he declared himself ready to operate at the earliest opportunity. He expressed himself as certain that diseased lobes could be easily and safely removed, and the patient thus given a chance of recovery. The dangers of the operation he regarded so lightly that he remarked that in case of erroneous diagnosis of incipient disease of the apex, no harm would be done if the thorax was opened and the lung found healthy! Besides showing specimens of the lung from which lobes had been removed, and of the heart in which sutures had been taken, he exhibited living and lively animals on which similar operations had been performed without apparent detriment to the general condition. In one of these animals, a rabbit, from which the upper lobe of the left lung had been removed some months previously, he made an incision through the skin in the median line, and exposed the

[1] Amer. Jour. of Med. Sciences, January, 1883, page 276; from Jour. de Méd. de Paris, October 28, 1882; from Gaz. Méd. de Strasbourg, October 1, 1882.

thorax by dissecting away the skin, so as to show the wound in the third intercostal space, and to demonstrate the fact that the remaining lobes of the lung had become expanded, so as to occupy more or less completely the place of the excised one. The thoracic wall was not drawn in, and the lung could be seen through the intercostal space, moving up and down over the region formerly occupied by the excised lobe. The antiseptic precautions were very simple; no one was allowed to touch the animal without disinfected fingers; and the operator, after washing his hands in a two per cent. solution of carbolic acid, rubbed pulverized naphthaline over them. He also rubbed the naphthaline over the region to be operated upon before making the incision, and used the same freely in the wound. After sewing up the incision, the wound was dressed with dry absorbent cotton covered with naphthaline, which was secured by a thin bandage similarly disinfected.

The animal submitted to this inspection with little sign of distress, and was not tied down for the purpose. Dr. Block assured us that the removal of the lung itself was borne equally well, which, he remarked, together with the fact that the whole operation only occupied about three minutes, should disarm the criticism of the anti-vivisectionists, especially when it was considered what a great alleviation of human suffering was anticipated. The doctor assured us that he had been promised opportunities to operate on the human subject, and that he should do so at an early date, with every hope of successful issue. He found it hard, however, to communicate his unbounded enthusiasm and hopefulness to others, and though much interest was shown in the preparations, many doubts were expressed in the first place as to whether the operation would prove so safe and simple in the human subject as in the rabbit, and in the second place as to whether the operation, if successfully performed, would be as efficacious as anticipated in checking the spread of pulmonary disease.

At that time Dr. Block had read an address before the Surgical Congress at Berlin, which he requested me to translate at his dictation for the JOURNAL. He dictated a part, and promised to dictate or forward the remainder soon. After that time I, however, neither saw nor heard from him, and during the summer took the unfinished manuscript with me to Paris. On returning to Berlin recently the news of his unhappy death reached me. It seems that he operated on a young lady, I am told a relative, at her own request. The lungs are said to have been found healthy, but the patient died, according to one report, during the operation; according to another, shortly after. Legal procedures were instituted, but the unfortunate operator took his own life by shooting himself through the head. These events took place several months ago, and are perhaps already known to your readers, as they are here to the laity as well as the profession. The result of the operation showed that the doubts expressed last June were not unfounded, and that the operation so easily performed on rabbits was not necessarily so safe and simple for the human subject as the projector supposed.

The address has been elsewhere reported, but it may not be out of place to give an abstract of that part of it which I translated. The author states that a heretofore insurmountable difficulty in the treatment of pulmonary phthisis has been overcome, and that experimentation has shown that we may enter with impunity the pleural cavity. Upon the fact that the disease begins as a local process, the author bases his hope to cure it by removal of the affected lobe or lobes. He demonstrates the advantage of the lungs over glands and joints as the seat of operation, inasmuch as they consist of independent lobes, which limits the chance of extension of disease after operation, and inasmuch as a vicariously working part makes good the loss with slight inconvenience and no disfigurement. He then details experiments by various observers, showing that both plugging and removal of parts of the lungs have been survived without injury. The advantage of the author's method over all former ones is stated to consist principally in the saving of time and danger by removing the lobe or lobes, previously ligated, through an intercostal space, without cutting ribs or costal cartilages. The operation is stated to have been performed on rabbits in three minutes without loss of blood from the large vessels.

The author considers resection of ribs unnecessary, because the lung even when infiltrated with tuberculous deposit can be removed through an intercostal space, as can be shown on the cadaver, also disadvantageous on account of liability to injury to the lung, and pleurisy, from the action of the edges of the ribs. The time of operation is reduced from forty-five to three minutes by operating between the ribs. He considers drainage unnecessary, as all unhealthy tissue should be removed, and he has never seen inflammation set up by the blood, secretions, or portion of lung behind the ligature.

In case empyema appear there is always time to remove the fluid under the known rules. He considers that drainage, besides interfering with the expansion of the lung, adds to the risk of introduction of inflammatory germs. A series of animals were exhibited operated on at periods varying from six months to two weeks before the Address. The tying down seems to have been the most disagreeable part of the operation, and the animals seem to have been more restless, and the operation less satisfactory when anæsthetics were used than when they were not. The first specimen was a buck rabbit from whom all the lobes of the left lung were removed four months previously, incisions being made in the third and fourth intercostal spaces, the latter for the admission of light. After several hours the animal seemed quite well and lively, springing upon a box, one and one half feet high.

The second specimen was a small dog, the upper and lower lobes of whose left lung had been removed, also about five months previously. Immediately upon its release the animal ate, and after forty-eight hours barked loudly and constantly. Seventeen days after the operation the wound was healed to a granulating line. Twenty-one days after the operation the pleural cavity was again opened, and no pathological appearance was found in the interior. Stretched across the upper part of the pleural cavity were several thin bands of connective tissue. Ten days after the second opening the wound was again healed to a granulating line.

Yours truly, G. L. WALTON.

BERLIN, *February* 19, 1883.

— At a recent meeting of the Obstetrical Society of New York, Dr. Mundé presented a pessary which he had lately cut out of its bed in the vagina seven years after its insertion.

Miscellany.

THE USE OF THE IRON SALTS.

WE find in the *Chemist and Druggist* a quotation from Dr. Prosser James, giving a summary of the position which dialyzed iron is entitled to hold in medicine. He says that the persalts of iron are frequently employed solely on account of their astringency, while the protosalts are occasionally considered as being destitute of this quality. The freshly prepared carbonate is an excellent mild chalybeate, but difficult to keep in an unaltered state, so that preference is given to reduced iron. The scale preparations of iron are held in repute both from the extreme facility of their use and their agreeable taste. When these three forms of iron are inadmissible dialyzed iron may be resorted to with admirable effect. It is a milder chalybeate than the three preceding, and does not produce irritation.

Respecting the therapeutic value of dialyzed iron, of which there has lately been some inclination to doubt, Dr. James says there is no question. By the method now followed of counting blood corpuscles it is found that the taking of dialyzed iron both increases their number and improves their condition. Dr. James gives, as an average dose, twenty to fifty drops, daily, in three doses. Dr. Weir Mitchell, of Philadelphia, gives as much as a drachm at a time. Specimens have appeared in the market which are not only innocent of any acquaintance with a dialyzing membrane, but seem little else than diluted solution of perchloride of iron.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 3, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal "Zymotic" Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Diarrhœal Diseases.
New York	1,206,590	719	268	16.12	23.49	5.00	1.96	1.95
Philadelphia	846,984	404	135	14.57	7.41	7.16	1.73	—
Brooklyn	566,689	279	112	17.23	21.54	10.82	3.23	2.16
Chicago	503,304	229	96	15.73	17.92	5.68	3.06	.87
Boston	362,535	171	55	18.10	14.60	11.76	1.75	4.64
St. Louis	350,522	159	54	18.87	18.24	5.63	5.63	3.15
Baltimore	332,190	168	74	28.80	15.60	9.60	2.40	—
Cincinnati	255,708	165	60	22.42	21.82	3.64	4.24	1.21
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	86	36	10.44	24.36	2.32	2.32	1.16
Pittsburg (1883)	175,000	65	20	26.18	15.38	3.08	—	1.54
Buffalo	155,137	74	28	27.00	17.55	5.40	9.45	—
Milwaukee	115,578	45	25	17.77	11.11	13.33	—	—
Providence (1883)	116,755	34	6	8.82	17.64	—	—	5.88
New Haven (1883)	73,000	29	11	17.25	28.60	6.90	—	—
Charleston	49,999	29	11	3.45	10.35	3.45	—	—
Nashville	43,461	26	9	19.25	11.55	—	3.85	—
Lowell	59,485	19	9	5.26	26.30	—	—	—
Worcester	58,295	15	7	13.33	26.66	—	—	—
Cambridge	52,740	20	5	15.00	10.00	10.00	5.00	—
Fall River	49,006	19	7	—	10.52	—	—	—
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	27	6	7.42	7.42	—	3.71	—
Springfield	33,340	8	3	25.00	25.00	12.50	—	—
Salem	27,598	16	6	25.00	—	6.25	—	6.25
New Bedford	26,875	10	1	—	20.00	—	—	—
Somerville	24,985	8	1	37.50	12.50	12.50	—	12.50
Holyoke	21,851	9	3	33.33	—	11.11	—	—
Chelsea	21,785	10	2	20.00	—	10.00	—	—
Taunton	21,213	9	2	11.11	44.44	—	—	—
Gloucester	19,329	2	1	—	—	—	—	—
Haverhill	18,475	8	2	12.50	25.00	—	—	—
Newton	16,995	4	1	—	—	—	—	—
Brockton	13,608	2	0	—	—	—	—	—
Newburyport	13,537	3	2	33.33	—	—	—	—
Fitchburg	12,405	3	1	—	—	—	—	—
Malden	12,017	7	2	—	—	—	—	—
Twenty-two Massachusetts towns	178,110	66	19	13.64	9.09	7.58	—	1.52

Deaths reported 2957 (no report from New Orleans): under five years of age 1080: principal "zymotic" diseases (smallpox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 507, lung diseases 507, consumption 420, diphtheria and croup 171, scarlet fever 71, diarrhœal diseases 44, typhoid fever 44, small-pox 35, whooping-cough 30, measles 27, cerebro-spinal meningitis 27, erysipelas 23, puerperal fever 19, malarial fever 15, typhus fever one. From *typhoid fever*, Philadelphia 13, New York eight, Pittsburg six, Brooklyn and Buffalo three each, Boston, Cincinnati, and District of Columbia two each, Milwaukee, Providence, New Haven, Lowell, and Lynn one each. From *small-pox*, Baltimore 20, Philadelphia six, Pittsburg and Nashville three each, New York, Chicago, and Buffalo one each. From *whooping-cough*, Cincinnati nine, New York and Brooklyn six each, Pittsburg three, Philadelphia two, Baltimore, Nashville, Springfield, Somerville, and Newburyport one each. From *measles*, New York 20, Cincinnati and Holyoke two each, Baltimore, Pittsburg, and Salem one each. From *cerebro-spinal meningitis*, New York and Chicago five each, Cincinnati four, Boston, St. Louis, Pittsburg, and Worcester two each, Baltimore, District of Columbia, Buffalo, Salem, and Haverhill one each. From *erysipelas*, Cincinnati five, New York four, Chicago and Buffalo three each, Philadelphia, Brooklyn, Baltimore, Milwaukee, New Haven, Chelsea, Milford, and Plymouth one each. From *puerperal fever*, Chicago five, Brooklyn three, St. Louis and Baltimore two each, New York, Philadelphia, Boston, District of Columbia, Buffalo, New Haven, and Taunton one each. From *ma-*

larial fevers, New York seven, St. Louis five, Baltimore two' Brooklyn one. From *typhus fever*, Milford one.

Seventy-one cases of small-pox were reported in Baltimore, Pittsburg four, Brooklyn two; diphtheria 28, scarlet fever 20, typhoid fever five, in Boston; scarlet fever 18, and diphtheria 12 in Milwaukee.

In 39 cities and towns of Massachusetts, with an estimated population of 1,136,092 (estimated population of the State 1,922,530), the total death-rate for the week was 19.31 against 19.94 and 16.09, for the previous two weeks.

In the 28 great towns of England and Wales, with an estimated population of 8,620,975, for the week ending February 17th, the death-rate was 21.9. Deaths reported 3611: acute diseases of the respiratory organs (London) 401, whooping-cough 100, scarlet fever 76, fever 74, measles 30, diarrhœa 29, diphtheria 23, small-pox (London and Birmingham three each, Newcastle two, Sunderland one) nine. The death-rates ranged from 15.3 in Birkenhead to 27.5 in Hull; Leicester 18.1; London 20.1; Leeds 22.4; Birmingham 23.9; Sheffield 24.4; Manchester 25.5; Liverpool 27.2. In Edinburgh 22.1; Glasgow 29.5; Dublin 39.1.

For the week ending February 3d, in 171 German cities and towns, with an estimated population of 8,597,081, the death-rate was 27.3. Deaths reported 4511: under five years of age 1965; consumption 709, lung diseases 535, diphtheria and croup 248, diarrhœal diseases 137, scarlet fever 76, typhoid fever 65, whooping-cough 50, measles and röt.eln 33, puerperal fever 23, small-pox (Cannstatt one) one, typhus fever (Hanover one) one. The death-rates ranged from 16.8 in Düsseldorf to 39.2 in Essen; Königsberg 30.8; Breslau 30.8; Munich 32.2; Dresden 24.2; Berlin 27; Leipzig 22.4; Hamburg 33; Cologne 21.7; Frankfort 21; Metz 19.5.

For the week ending February 17th, in the Swiss towns, population 494,390, there were 39 deaths from lung diseases, consumption 35, diarrhœal diseases 15, diphtheria and croup 11, typhoid fever three, scarlet fever two, erysipelas one, small-pox one. The death-rates were, at Geneva 14.4; Zurich 22; Basle 21.4; Berne 32.8.

The meteorological record for the week ending March 3d, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date. February–March, 1883.	Barometer. Daily Mean.	Thermometer. Daily Mean.	Thermometer. Maximum.	Thermometer. Minimum.	Relative Humidity. 7.23 A. M.	Relative Humidity. 3.23 P. M.	Relative Humidity. 11.23 P. M.	Relative Humidity. Daily Mean.	Direction of Wind. 7.23 A. M.	Direction of Wind. 3.23 P. M.	Direction of Wind. 11.23 P. M.	Velocity of Wind. 7.23 A. M.	Velocity of Wind. 3.23 P. M.	Velocity of Wind. 11.23 P. M.	State of Weather.[1] 7.23 A. M.	State of Weather.[1] 3.23 P. M.	State of Weather.[1] 11.23 P. M.	Rainfall. Duration. Hrs. & Min.	Rainfall. Amount in inches.
Sun., 25	29.873	39	47	25	88	93	69	83	SE	S	NW	10	12	22	R	R	C	—	—
Mon., 26	29.895	29	36	22	60	68	58	62	W	W	NW	11	28	23	C	F	C	—	—
Tues., 27	30.185	18	24	12	61	67	73	67	NW	NW	SW	14	20	10	C	C	O	—	—
Wed., 28	30.171	25	32	11	73	56	87	72	W	NW	W	8	20	3	F	C	C	—	—
Thurs., 1	30.336	29	41	19	64	53	60	59	W	SW	S	7	8	11	C	O	C	—	—
Fri., 2	29.855	44	57	31	74	49	64	62	SW	W	N	14	12	14	O	C	C	—	—
Sat., 3	30.072	26	37	19	64	36	42	47	N	W	NW	13	14	15	O	C	C	—	—
Means, the week.	30.129	30	57	11				65										20.30	.53

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 2, 1883, TO MARCH 9, 1883.

BROWN, HARVEY E., major and surgeon. To be temporarily assigned to duty at Mount Vernon Barracks, Ala., during the absence on leave of Captain T. A. Cunningham, assistant surgeon. Paragraph 2, S. O. 17, Department of the South, March 6, 1883.

CALDWELL, D. G., captain and assistant surgeon. To be relieved from duty at Fort Fred. Steele, Wyo., and will report in person to the commanding officer, Fort Laramie, Wyo., for assignment to duty at that post. S. O. 23, Department of the Platte, February 27, 1883.

PAULDING, H. O., captain and assistant surgeon. The leave of absence granted in S. O. 11, Department of the Platte, January 27, 1883, is extended twenty days. S. O. 23, Military Division of the Missouri, March 2, 1883.

CORRECTION.

MR. EDITOR: In a report of the February meeting of the New York Society of Medical Jurisprudence, published in a recent issue of your journal, I am represented as differing from Dr. Hammond as to the diagnosis of the mental state of the assassin Dubourque. I am at a loss to account for the statement attributed to me that Dubourque was suffering from "general paralysis," for those words were not used by me that evening. I agreed with Dr. Hammond in considering Dubourque to be a "monomaniac with delusions of persecution," and differed from him solely on the question of responsibility, he considering him punishable and I not.

Respectfully, E. C. SPITZKA.

130 EAST FIFTIETH STREET, NEW YORK, *March* 9, 1883.

CORRECTION.

IN the report of the Boston Society for Medical Improvement meeting of February 26th, Dr. Fifield's remarks on Acute Dilatation of the Stomach should read "The case had been at first treated by an irregular."

E. M. BUCKINGHAM, M. D., *Secretary*.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the Society will be held at 19 Boylston Place, on Monday, March 19, 1883, at eight o'clock P. M. Reader, Dr. George Stedman. Subject, (a.), A Case of Laudanum Poisoning in a Child two Days old; Recovery. (b.) Two Cases of Abortion, one presenting Unusual Difficulties in the Ante-Mortem, the other in the Post-Mortem, Diagnosis of the Cause of Death.

C. M. JONES, *Secretary*.

SUFFOLK DISTRICT MEDICAL SOCIETY. SECTION FOR OBSTETRICS AND GYNÆCOLOGY. — There will be a meeting of this Section at 19 Boylston Place, on Wednesday, March 21st, at eight P. M. Dr. T. A. DeBlois will exhibit a new Gynæcological Chair. Dr. C. P. Strong will report a Case of Vomiting late in Pregnancy. Dr. J. W. Farlow will report a Case of Puerperal Convulsions with Induction of Labor.

J. B. SWIFT, *Secretary*.

BOOKS AND PAMPHLETS RECEIVED. — A Text-Book of Pathological Anatomy and Pathogenesis. By Ernst Ziegler, Professor of Pathological Anatomy in the University of Tübingen. Translated and edited for English Students by Donald Macalister, M. A., M. B. Part I. General Pathological Anatomy. London: Macmillan & Co. 1882.

Transactions of the Medical Society of the State of Pennsylvania at its Thirty-Third Annual Session, held at Titusville, May 10–12, 1882. Philadelphia. 1882.

Original Articles.

NEW MEXICO. ITS CLIMATIC ADVANTAGES FOR CONSUMPTIVES.

BY J. HILGARD TYNDALE, M. D., NEW YORK.

When we wish to obtain knowledge in reference to the climate of any section of our country, the meteorological reports of the United States Signal Service are our chief source of information. They are accurate, and are cheerfully and quickly furnished. Meteorological data represent the ever-shifting phenomena in the sea of air surrounding our globe. The "climate" of any region is the embodiment of some stable elements with the above changes superadded, in which embodiment regional geography and local conformation play a prominent part. For this reason it is well to visit and inspect in person the territory, the climate of which it is desired to investigate. Hence my recent trip to New Mexico.

Personal observations with regard to climate include the use of your own powers of observation, the finding of meteorological data kept by physicians or some scientifically inclined individuals, and personal interviews with them. If my material is somewhat scanty, it is because in previous observations I have had to deal with a region of advanced civilization, whereas in New Mexico everything may be said to be new, notwithstanding the evidences of civilization of by-gone ages.

In determining whether and how far the climate of any locality or region of country is suitable for consumptives in the earlier stages, we look for certain elements which reason and experience have shown to exert in combination a beneficial influence upon the general condition and upon the destructive process going on in the lungs of a patient. In my opinion the great desideratum for an ideal climate is an *aseptic atmosphere with considerable altitude for some, and little elevation or sea-level* for the other forms of pulmonary consumption.[1]

AN ASEPTIC ATMOSPHERE.

Germ pathology is now sufficiently far advanced to justify us in accepting the fact of germs (bacteria) being the "ferment of contagion," the organisms which usher in putrefaction in phthisis (I am not satisfied of the specific character of the tubercle bacillus), to cause us to reflect upon the importance of excluding further invasions from without, and to check proliferation within, if not to destroy the already existing breed, and lastly to reason from the premises of the known facts, that lowlands with warmth and moisture are the breeding grounds of septic organisms. Now a truly aseptic atmosphere should not be steadfastly warm or hot, nor loaded with moisture, as the result of evaporation from large bodies of water on the one hand, while the geological substratum of a chosen locality should not admit of subsoil moisture on the other. The importance of subsoil moisture in the development of pulmonary consumption was urged by Dr. Bowditch, of Boston, as early as 1862.[2]

[1] A series of articles giving the opinion of the most prominent pneumatologists of our country on the elements going to make up a suitable climate for consumptives will appear shortly.

[2] Topographical Distribution and Local Origin of Consumption in Massachusetts. By H. I. Bowditch, M. D., of Boston. (Medical Communications of the Massachusetts Medical Society, vol. x., No. 2, 1862.)

The elements of meteorological changes concerning us are humidity, degrees of temperature as to means and equability (diurnal and annual range), barometric pressure, the movements of the air ocean (frequency and velocity of winds), the rainfall, and intensity of sunlight. More or less frequent electric changes, not too frequent winds, and occasional rainfall, are not disturbing factors in the benefit to be gained by consumptives. On the other hand rapid and frequent thermometric changes, a lack of stability of temperature; winds of great velocity and some persistence; and a high relative humidity of some duration — these three elements, when combined for a number of days in any region, are known to be the fruitful source of severe colds, of acute inflammation of the air passages.[3]

Seibert proves from six hundred cases that "if a strong wind accompanies a high, or a rising, or a long-lasting high percentage of humidity, together with an already low or then falling thermometer, then the frequency of pneumonia will be found to be astonishing."

The qualities necessary, then, to constitute an aseptic climate, one which yields no breeding ground for infection, and where the meteorological conditions do not favor acute exacerbations of pulmonary troubles, includes the contrary of the above conditions, namely: —

(1.) Dryness, absence of persistent humidity.

(2.) A cool or moderately warm atmosphere, with a reasonable equability of temperature.

(3.) Shelter from or absence of frequent winds of great velocity.

(4.) A preponderance of clear days over the cloudy ones — in other words, abundance of sunshine, as a natural accompaniment of the other constituents.

ALTITUDE.

Elevation above the sea level may be spoken of as low, medium, and high altitude, ranging say from 1500 to 6000 feet. The latter may be considered as the "line of immunity" in our latitudes. The proper altitude for any given patient should be chiefly determined by the condition of his heart's action. Feeble impulse and rapid action, to begin with a low or moderate altitude (1000 to 2000); moderately weak impulse and rapidity of action, somewhat above normal, to medium altitudes (2500 to 4000 feet); no great variation from normal impulse and action, to high altitudes (4500 feet and over).

With increasing elevation the pressure of the air column is diminished; equably lessened barometric pressure is indicative of a relatively low degree of humidity, and accords with relative dryness found at high altitude.

Of ozone we need not speak here. Its importance and action upon the human organism are undergoing investigation.[4]

Now let us see whether these requirements (which for the want of space I have given only in abstract) are found in New Mexico, and if so, to what extent.

The physical aspect of New Mexico may be briefly summed up as follows: The "Spanish Range" of the Rocky Mountains enters the Territory from the north, and, spreading out into spurs, like the spread fingers

[3] Seibert on Meteorology and Croupous Pneumonia in American Journal Medical Sciences, January, 1882.

[4] See Ozone in Relation to Health and Disease. By Henry Day, M. D. (London.)

of a hand, gives rise to numerous valleys between each spur. The rest of the country is a broad expanse of rolling meadow land, at an elevation varying from 7000 to 6000 feet, sloping off toward the south, and decreasing in elevation down to 3000 feet above sea level. Away from the general range, mountains, valleys, and plains are more or less abruptly intermingled. In the words of Dr. Bizzell, "Rapid transition and great diversity of elevation, containing within its border deep valleys, gorges, and cañons, associated with mountains and elevated and more or less arid plains."

The soil is, of course, a porous one, as is the case throughout the Rocky Mountain region.

Water courses are few and far between. Such creeks as there are, all have their fountain-heads in the regions of eternal snow. The water is clear and supposedly chemically pure, being largely melted snow. Temperature of mountain-stream water about 58° F.

Vegetation is as sparse as it is in Northern Colorado, notwithstanding the more southern latitude. The pine growths of the mountains and mountain plateaux are not sufficiently dense to impregnate the air with terebinthine odors, and thus to be considered as a direct antiseptic agent for continuous inhalation.

In considering in how far we find the elements which we accept as constituting a suitable climate for a majority of consumptives we will begin with

ELEVATION.

Every degree of altitude is represented, from 3000 feet to 8000 feet and over. As 6000 feet represents our "line of immunity," we have use only for altitudes from 1500 feet to 6000 feet. The Atchison, Topeka, and Santa Fé Railroad traverses the Territory from north to south. Along its line have grown up the principal towns and settlements, representing all the above elevations. Traveling through Kansas on the same road it became clear to my mind that coming from the East through that State, and passing through New Mexico from north to south, an invalid is enabled to make a slow journey, beginning at a comparatively low altitude in Kansas, and traveling westward, to gradually ascend, until an elevation of from 6000 to 7000 feet is reached. This may be accomplished without deviating from a straight course westward, and yet to stop at towns of such size as to afford the necessary comforts of life, good food, society, medical attendance, and other things pertaining to civilization. To illustrate this I will give the names of such places, together with their elevations, from east to west on the railroad: —

In Kansas: Topeka, 904 feet; Emporia, 1161 feet; Newton, 1433 feet; Larned, 2015 feet; Kinsley, 2207 feet; Dodge City, 2499 feet; Lakin, 3020 feet.

In Colorado: Las Animas, 3959 feet; La Junta, 4117 feet; Trinidad, 6034 feet.

In New Mexico: Las Vegas, 6452 feet; Santa Fé, 7013 feet.

Beginning in the south, at the junction of the Territory of New Mexico with Old Mexico and the State of Texas, the figures run upwards toward the north to Raton, near the Colorado line, as follows: —

El Paso, 3662 feet; La Mesilla, 3844 feet; Socorro, 4665 feet; Silver City, 5890 feet (not reached by rail); Albuquerque, 5006 feet; Las Vegas, 6452 feet; Raton, 7861 feet.

Our next question relates to the aseptic qualities of the atmosphere, and the elements which render it so at these several elevations.

DRYNESS.

The low relative humidity of the elevated regions of New Mexico are primarily due to far inland position, a fact dwelt upon by Dr. Charles Denison in his work Health Resorts in the Rocky Mountains, and previous papers. The great distance from the Atlantic and Pacific Oceans, as well as the Gulf of Mexico, would preclude any great quantity of moisture from these great sources; and such as it might be, is still further diminished and diluted as it ascends and spreads into space. The other source of more or less constant humidity, subsoil moisture, is naturally absent at such elevation, where the soil is a porous one. Of the rain and snowfall, the tables of the Signal Service as given at their three stations, Santa Fé, La Mesilla, and Silver City, will give information: —

LA MESILLA.

Altitude, 3844 feet; latitude, 32° 17′; longitude, 106° 48′; mean annual barometer, 26.070.

Mean relative humidity from September, 1877, to August, 1882: —

Average mean of five years: 43 per cent. saturation.

Average mean for each month of the year: —

January	51%	July	49%
February	45%	August	50%
March	35%	September	47%
April	31%	October	43%
May	29%	November	42%
June	31%	December	51%

Minimum percentage (greatest dryness) 22.5, May, 1879.

Maximum percentage (highest degree of saturation) 64.5, January, 1879.

SILVER CITY.

Altitude, 5890 feet; latitude, 32° 48′; longitude, 108° 15′.

Mean relative humidity from May, 1878, to December, 1882: —

Average mean of four years: 43 per cent. saturation.

Average mean of each month of the year: —

January	58%	July	52%
February	54%	August	61%
March	42%	September	55%
April	34%	October	54%
May	32%	November	53%
June	34%	December	49%

Minimum percentage (greatest dryness) 18.8, June, 1878.

Maximum percentage (highest degree of saturation) 67.8, August, 1881.

SANTA FÉ.

Altitude, 7013 feet; latitude, 35° 41′; longitude, 106° 10′; mean annual barometer, 23.262.

Mean relative humidity from January, 1872, to December, 1882: —

Average mean of ten years: 45 per cent. saturation.

Average mean of each month of the year: —

January	52%	July	40%
February	54%	August	51%
March	42%	September	43%
April	33%	October	42%
May	29%	November	49%
June	34%	December	55%

Minimum percentage (greatest dryness), 20.0, May, 1873.

Maximum percentage (highest degree of saturation), 71.4, August, 1876.

The most noteworthy fact in connection with the above showing is the very low mean relative humidity in three places, representing the southern, southwestern, and northern portions of the territory. The higher percentages of humidity, occurring in the summer months of July and August, as also in the winter months of December, January, and February, are in accord with the rain and snowfall. On some parts of the coast of California the rainfall is out of all proportion to relative humidity and its percentage, a fact which makes dryness a very doubtful constituent.

Precipitation. Annual Amount (in inches and hundredths).

LA MESILLA.

1878	1879	1880	1881
8.07	7.30	7.10	15.05

SANTA FE.

1873	1874	1875	1876	1877	1878	1879	1880
9.73	19.93	18.97	15.97	13.15	19.52	11.44	9.89

SILVER CITY.

1879	1880	1881
13.77	16.90	30.82

At Fort Union the total rain and snowfall for the year 1881 amounted to 39.48 inches.

In comparing the dryness of these several localities it will be observed that the Mesilla Valley carries off the palm, both as regards relative humidity and precipitation; none of the monthly averages of five years show more than a trifle above half saturation (50 per cent.), while as low an average as 29 per cent. is reached, and in one month 18 per cent., a degree of dryness rarely attained. As proof of this I reproduce the mean relative humidity of various sections of our country: —

New England States, 73 per cent.; Middle Atlantic States, 74 per cent.; South Atlantic States, 79 per cent.; Gulf States, 82 per cent.; Lower Lake Region, 79 per cent.; Upper Lake Region, 70 per cent.; Ohio Valley, Tennessee, and the Northwest, 73 per cent.; Lower Mississippi Valley, 58 per cent.; Denver, Colorado, 42 per cent.

By far the heaviest rainfalls occur in the months of July and August. While there is scarcely any rain during the other months, the rains of midsummer resemble deluges in their character. Very little snow falls except on the highest mountain ranges, from whence it drifts in small part into the valleys and the towns located therein.

Closely allied to the subject of dryness is that of *sunshine*. Of this there is an abundance in New Mexico, the number of perfectly clear days far outnumbering the overcast, cloudy, and rainy ones taken together. I regret that, aside from the reports appended, no records have been kept anywhere of the number of clear days in any one year. The only private data I could stir up were in possession of parties at Las Vegas Hot Springs, and these, I have reason to believe, were not reliable.

Number of Clear, Fair, and Cloudy Days.

LA MESILLA.

Year.	Clear.	Fair.	Cloudy.
1878	238	93	34
1879	252	81	30
1880	191	135	40
1881	161	157	47

SANTA FE.

Year.	Clear.	Fair.	Cloudy.
1877	140	158	51
1878	160	169	36
1879	169	152	33
1880	184	137	45
1882	188	138	39

The year 1881 is omitted, as the report was incomplete.

SILVER CITY.

Year.	Clear.	Fair.	Cloudy.
1879	246	87	34
1880	230	104	32
1881	222	109	32

Average Number of Clear Days in the Summer Months (April to October) and the Winter Months (October to April).

Locality.	Summer.	Winter.	Yearly Average.
La Mesilla.	140	115	255
Santa Fé.	87	104	191
Silver City.	112	122	234

A residence of nearly two years in Colorado justifies me in saying that on "fair" days the sun shines during a goodly portion, if not the greater part of the day. This fact enables me to state that the sun shines during a number of hours almost every day in the year and quite certainly in this proportion: —

La Mesilla, 325 to 333 days; Santa Fé, 298 to 326 days; Silver City, 330 to 335 days.

In the first two above-named places there were no cloudy days for the three consecutive months of June, July, and August, 1879 (a very dry year). At Silver City the *number of cloudy days* for each month in two consecutive years is worth recording: —

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1880	1	3	0	2	0	0	12	5	3	0	1	5
1881	0	2	0	2	3	2	8	6	4	1	3	2

(To be concluded.)

ACUTE INFANTILE PERITONITIS.[1]

BY T. M. ROTCH, M. D.

PERITONITIS may occur in the infant and child as it does in the adult.[2] As an idiopathic disease it is so rare in infants and children that the cases where it has been studied post mortem have occurred almost exclusively during uterine life, and many of these have presented a history of syphilitic infection. Dr. West[3] in his large experience has seen but one case, an infant seven months old. The septic form of peritonitis is not infrequently met with in the early weeks of life, especially under conditions unfavorable to health, but it is exceedingly rare after the first six weeks. At the Hospice des Enfans Trouvés it was found[4] in six per cent. of the deaths which occurred in one year; there were thirty-nine cases, and though the patients consisted of children of all ages, no case over the age of ten weeks was attacked by it, while thirty-five of the thirty-nine cases were less than two weeks old.

This septic form is supposed to start from the umbilicus,[5] and is a phlebitis umbilicalis, caused either by the diseased umbilicus itself or by puerperal disease in the mother. Infants and children[6] of any age may be attacked by acute peritonitis, following burns, traumatic causes, tuberculosis and infectious diseases, syphilis, the exanthemata, especially scarlet fever, and rheumatism.

Where no cause can be found for the disease we speak of idiopathic or the rheumatic form, opinion being divided as to whether a true idiopathic peritonitis really exists, some maintaining that in the cases reported as such the original lesion has been overlooked, while others consider that an inflammation of the peritonæum may occur of itself, as it does in the pleura, pericardium, etc.

Acute peritonitis in any of the above forms is exceedingly rare between the ages of six weeks and two years. Where some direct cause, such as one of those just enumerated, cannot be found the diagnosis is at times difficult from a want of prominence of some of the symptoms, such as the tympanites, which may be but slightly marked, and it is therefore of importance for the purpose of advancing our knowledge of the differential diagnosis and ætiology of the disease to record those cases where the clinical history has been carefully taken, and where the autopsy has been made by a competent observer, especially as in nurslings the prognosis is so unfavorable, the disease usually proving fatal in a few days.

It is with this view that I have thought it worth while to present to your notice the history of three cases of acute infantile peritonitis.

CASE I. A male infant, two months of age, was seen July 5, 1875, by Dr. Minot, who has kindly allowed me to make use of his notes. Dr. Gordon, of Quincy, took care of the case and performed the autopsy. The infant was healthy and breast fed, the mother a primipara with plenty of milk. For several weeks the infant gained a pound a week. June 28th he began to have dyspeptic symptoms, represented by pain, vomiting, and passages of undigested milk. The symptoms were not urgent, but the infant began to fail in weight and strength, and soon refused to nurse. Various diets were tried, and each was at first eagerly taken but soon rejected by the infant, which was almost moribund when seen by Dr. Minot. Some tenderness of the abdomen was found but no great tympanites, and the vomiting was not a prominent symptom. Cyanosis was marked throughout the attack, and there was some œdema of the hands and feet. Pulse 100; temperature (per rectum) 101° F. There was some suppression of urine. Death took place July 7th. At the autopsy, which was made by Dr. Gordon, the peritonæum was found injected, and there was an effusion of serum and a slight amount of fibrinous exudation; there were no adhesions. The kidneys were much enlarged for an infant of two months, but no disease was detected.

The interesting features of this case, supposing that it was a case of idiopathic peritonitis, was the age, two months, and the want of prominence of the vomiting and tympanites.

CASE II., which is typical of the idiopathic form, occurred under the care of Dr. C. P. Putnam in an infant six months of age at the Infant Asylum, June 17, 1874. The infant was vigorous and well nourished up to the time of the attack, the symptoms of which were continuous vomiting, slight distention of the abdomen, and great tenderness, running a rapid course and terminating fatally in thirty-six hours.

Dr. Fitz, to whom I am indebted for a record of the autopsy, found no lesions of any importance excepting reddening of the peritoneal surface of the intestine and a small quantity of pus in the peritoneal cavity. The case is important from having passed through the hands of an observer like Dr. Fitz without any lesion such as could constitute a source for the peritonitis being found.

CASE III. occurred at the West End Nursery under the care of Dr. Haven, who has allowed me to make use of his careful record of the case.

F. B., a male infant nineteen months old, was first seen at the West End Dispensary by Dr. Haven, March 15, 1882. The infant had a good family history, and weighed 3400 grammes at birth; he was breast fed until the age of six weeks, when he was weaned and put on Mellin's food and cow's milk, and at three months he was receiving mixed table diet. When seen, March 15th, he was well nourished and vigorous, and came to the dispensary to be vaccinated; his weight was 9340 grammes.

April 12th I first saw the infant at the dispensary, he being brought to me for cough and restlessness, which had begun two days previously, and having been up to that time strong and well. His appetite was poor; he was fretful, and his food seemed to distress him; his bowels had not been moved for two days; he was feverish and thirsty. A physical examination showed his flesh to be firm and his color and development good; he had eight teeth (the incisors); his tongue was slightly coated; both tonsils were enlarged and reddened; nothing abnormal was discovered anywhere on palpation or percussion. Auscultation gave coarse mucous and sonorous râles in both backs.

The patient was next seen by Dr. Haven, June 3d, when the report was bad cough for two weeks and poor appetite.

June 10th he was reported as improved, and eating and sleeping better.

[1] Read before the Boston Society for Medical Observation, December 18, 1882.

[2] Vogel. Diseases of Children.

[3] West. Diseases of Children.

[4] M. Thore. Archives gén. de Méd., August and September, 1846.

[5] Vogel.

[6] Rehn. Gerhardt. Handb. der Kinderkrank., vol. iv.

June 19th the dejections were green and slimy; the gums were slightly swollen over the canines; restless. Put on milk diet again.

June 23d. Bowels had been moved more frequently for some days; four movements on the previous day, green, slimy, and with a little blood. This state of affairs, with occasional remissions, continued until June 30th, when he was found to be decidedly better, having two movements daily; he still had some cough, and it was found that he lived in a damp basement.

November 14th. He appeared to be well.

November 15th. He vomited twice.

November 16th. He had six movements, green, with blood.

November 19th. He had five movements early in the day, none later; has vomited more or less since the 16th and had cough.

November 20th. Weight 8092 grammes, a loss of 125 grammes since March 15th; appetite poor; face pale; nares acting slightly. Respirations 36; temperature 39.4° C; grunting expiration. Nothing abnormal was found in the chest excepting a few fine râles over right apex. Nothing found in throat. Admitted to nursery. Was quiet during the day, and took milk well. The respiration gradually increased in frequency during the day and the abdomen became distended. At six P. M. temperature 40.3° C.; respirations 74. Abdomen very much distended. One dejection, dark, clayey, green, homogeneous, large, good consistency, offensive. At eight P. M. face pinched and pale; expression anxious; respiration very quick; expiration grunting; abdomen very much distended and tense, tender all over. Percussion showed nothing abnormal. On auscultation respiration rather weaker over left lower back. Did not sleep until three A. M.

November 21st, 1.55 A. M. Temperature 38.6° C. 5.10 A. M. Temperature 38.6° C. Slept till five A. M.; since then restless; abdomen less distended; respirations 74. Nothing abnormal found in lungs; abdomen very tender all over; restless all day. 3.30 P. M. Two dejections during the day; urine scanty. Temperature 41.2° C. 5.20 P. M. A pack at 90° F. was given, in which he was kept until 6.40. At 5.30 the temperature was 40.4° C., and at 6.50 40° C.; respirations 66. 9.55 P. M. Temperature 40.8° C.; respiration 74; more restless. Ten P. M. Pack at 90° F. Eleven P. M. Temperature 40° C. Pupils noticed to be contracted; not contracted before. Died at 11.10 P. M. At instant of death the pupils dilated widely; death very quiet.

November 22d. Autopsy at eleven A. M., by Dr. Whitney.

The loops of intestine were found bound together by a yellow fibrinous exudation and were easily separated; there was no reddening on the surface of the intestine.

The heart was normal, and there was a small amount of fluid in the pericardium.

The lungs were normal, excepting that both lower lobes were dark reddish in color, did not crepitate, and that only a small amount of air could be squeezed from them. Both lower lobes, but especially on the right side, were bound down by a firm fibrous band.

The spleen was enlarged, was covered on the surface with a fibrinous exudation, and the follicles were very much enlarged, distinct, and rather firm.

The kidneys were pale and normal in size.

The liver was covered with flakes of recent lymph, and on section showed the acini red and their periphery yellowish and opaque.

The mesenteric lymph glands were enlarged, varying from the size of a pea to that of a small cherry; the smaller were all translucent on section, and presented only evidences of hyperplasia. A small pocket of the larger glands were found to have become cheesy in the central portions, and in two of these the process had extended through the substance of the gland, broken through its peritoneal covering, and about these points of rupture there was a small zone of reactive inflammation.

Pathological Diagnosis. — *Acute general peritonitis*, which, from an absence of any other source, must be considered to have been caused by the rupture of the above spoken of cheesy degenerated mesenteric glands; *follicular hypertrophy of the spleen, atelectasis of the lungs, chronic fibrinous pleurisy.*

In this case the high temperature and distended, tender abdomen rendered the diagnosis comparatively plain, but the case is doubly rare and important on account of the cause,[1] when we consider that there is seldom any noticeable enlargement of the mesenteric glands under the age of three years, and that these glands seldom soften, but either retrograde or harden from calcification.

ARSENICAL PARALYSIS.[2]

BY CHARLES K. MILLS, M. D.,

Neurologist to the Philadelphia Hospital; Professor of Diseases of the Mind and Nervous System in the Philadelphia Polyclinic and College for Graduates in Medicine.

Having presented this case as fully as possible, I will give in a few words all the information I have been able to obtain as to paralysis and other nervous symptoms shown by the other victims of the poisoning.

Six others altogether, besides our patient, were poisoned. One of these was a little boy, four years old, I. S., to whom a piece of the fatal pie was given as a reward for going on an errand. He died within ten hours, and I have no knowledge of observations as to paralysis or other manifestations of involvement of the nervous system. Probably his death occurred too soon to allow any such observation to be made.

M. S., a sister of the little boy, ate a very little of the pie, and suffered to some extent, but not seriously.

C. H. G., the father of the patient, died November 8th, six days after the ingestion of the arsenic. Besides severe gastro-intestinal symptoms he suffered with pain in his head, back, and limbs, was delirious for some hours, and was almost completely paralyzed.

Mrs. G., mother of the patient, ate a little of the pie November 2d, and had an attack of vomiting. On the 4th she ate a piece of custard, which was also found to contain arsenic, and was attacked with vomiting. A few days later weakness of the legs, with aching and numbness, came on, and the right foot and leg became swollen and inflamed. She gradually recovered.

Mrs. V. ate a mouthful or two of the pie and custard containing the arsenic, and suffered with vomiting, etc., for three days. She has since had paresis and paræsthesia of the legs.

[1] West. The Wasting Diseases of Children.

[2] Concluded from page 248.

Mrs. F., who ate freely of the poisoned food, suffered severely from gastro-intestinal symptoms. She is now under the professional care of Dr. H. N. Umstead, of Yerkes P. O., Montgomery County, Pa., who has courteously written to me about her condition, and the substance of whose communication I will give. Dr. Umstead states that Mrs. F. has been paralyzed from the elbows to the ends of her fingers, and from the knees to the toes. She complained of numbness and coldness in the limbs, and a feeling as if a cord was tied tightly around the waist. She had extreme pain in the paralyzed extremities. She has greatly improved, is riding out daily, can stand without aid, and can even walk a little with assistance. She still has some pain in the hands and in the soles of the feet, but they are not tender to the touch. She has some anæsthesia of the hands and feet, especially of the latter. She begins to enjoy her food, for which at first she had great loathing. Her bowels are moved once, and she urinates twice, daily, but has not quite the natural sensation when the bowel or bladder is evacuated. Dr. Umstead states that Mrs. F. and Mrs. V., whom he also treated, make five cases of arsenical paralysis which have fallen under his care during his professional career.

A careful analysis of the history and symptomatology of the case detailed must compel me to conclude that in well-marked arsenical paralysis we have to deal with a diffused myelitis, decided motor, trophic, and sensory bilateral phenomena being present.

With the assistance of Dr. J. H. Lloyd, one of the staff of the nervous dispensary of the University Hospital, I began the preparation of a résumé of the literature of arsenical paralysis, when the *Journal of Nervous and Mental Disease* for October, 1882 (edited by William J. Morton, M. D., of New York), containing an admirable article on the subject by Prof. E. C. Séguin, came to hand. In this paper the literature of the subject is given with considerable fullness, and to it I would refer those interested.

Beginning with Abano, who flourished as early as the thirteenth century, the authorities quoted or referred to by Professor Séguin are Forestus, Zacchias, Hahnemann, Thilenius, Brodie, Orfila, Christison, Graves, Huss, Leroy d'Étiolles, Imbert-Gourbeyre, Smoler, Jaccoud, Seeligmüller, Popow, Rosenthal, Romberg, Erb, Hammond, and DaCosta.

I will refer here only to the observations of Christison and Popow. Christison describes two classes of cases of arsenical poisoning in which the victims die early without paralysis, and a third class of what he terms subacute cases, with moderate gastro-intestinal inflammation. "In the later stage these cases are apt to show marked nervous symptoms: coma, epileptoid attacks, mania, tetanus, hysterical seizures, partial paralysis resembling lead, paralysis in affecting the extremities; contractures may exist."

In 1881 Popow, of St. Petersburg, published an essay upon the pathological anatomy of arsenical paralysis as produced artificially in animals. The work of Popow was carried on under the guidance of the distinguished neurologist and microscopist, Professor Mierzeyewski, and Séguin considers his essay as in many respects the most important contribution yet made to the subject. Popow concludes that arsenic, even in a few hours after its ingestion, may cause acute central myelitis or acute poliomyelitis; that in chronic cases pathological changes are found in the white as well as in the gray substance, constituting a diffused myelitis; and that the peripheral nerves remain normal, even three months after intoxication. Séguin gives condensed accounts of a few of the cases reported in the literature of the subject, and also reports three cases of his own, all would-be suicides with Paris green. His conclusions are practically the same as those of Popow. According to Séguin, whether the myelitis is strictly arsenical, that is, caused by the direct effect of the arsenic on the tissue of the spinal cord, or whether it is produced (as are many forms of myelitis) by the irritation of peripheral nerves (cutaneous, intestinal, and gastric nerve-endings), is a question which cannot at present be definitely solved, but which presents an interesting field for future research and speculation.

Dr. Lloyd has collected the following references to authorities and cases in addition to those cited by Séguin: —

Beck [1] gives three classes or varieties of arsenical poisoning. In the third variety there is first the inflammatory action, then, when this recedes, comes the second stage, that of nervous involvement. The nervous symptoms vary "from coma to an imperfect palsy of the arms and legs, and between these extremes are observed epileptic fits or tetanus."

Taylor [2] gives several cases where the symptoms of *narcotism* (or general paralysis of the nervous system) were marked.

A man swallowed, by accident, some arsenic early in the morning. He went to work for several hours afterwards, and was then gradually observed to sink into a drowsy state, and died that night with no complaint of pain.

A child, aged two and one half years, died *narcotized* two hours after taking the poison.

Wharton and Stillé [3] make mere mention of palsy as a symptom which is apt to occur late in the case.

Taylor [4] speaks of local paralyses, preceded by numbness or tingling in the fingers and toes, as common consequences of chronic arsenical poisoning.

According to Stillé [5] arsenical paralysis most frequently affects the lower limbs first, extending gradually to the arms, but it is more permanent in the legs, continuing for months or even years. It is accompanied with cramps, spasmodic movements, numbness, and formication. The cutaneous sensibility is impaired, and the patient generally complains of coldness in the parts affected.

H. C. Wood [6] speaks of paralysis which follows nonfatal cases, and affects preferably the lower extremities, commencing and remaining longest in them; does not select the exterior muscles, and is almost always accompanied by anæsthesia, or at least by numbness and formication, and by coldness of the extremities. He quotes experiments on frogs, mostly from Sklarek.

Ringer [8] refers to his experiments on frogs. He found paralysis of sensation, reflex action, and voluntary motion. He believes that the paralyzing action is exerted on the cord first, then on the nerves, and

1 Elements of Medical Jurisprudence, sixth edition, vol. ii., 1838.
2 On Poisons, etc., 1848.
3 A Treatise on Medica. Jurisprudence, second and revised edition, 1860.
4 A Manual of Medical Jurisprudence, seventh American edition, 1873.
5 Therapeutics and Materia Medica, fourth edition, vol. ii., 1874. p. 816.
6 A Treatise on Therapeutics, etc., second edition, 1876.
7 Hand-Book of Therapeutics, ninth edition, 1883.

last on the muscles. The difference may be noted between Ringer and Séguin that Ringer does not refer all pathological changes to the cord. He regards the arsenic as a "protoplasmic poison," affecting all tissues. He says that frogs are sometimes only apparently paralyzed, that is, sensation is lost, and hence there is no response to external irritants, but if laid on their back they turn themselves over.

The Index Catalogue of the Surgeon-General's Office gives the titles of forty-three books on the Physiological and Therapeutic Effects of Arsenic, but nothing special on its paralyzing effects.

Gibb[1] records the case of a lady who had taken arsenic, mostly Fowler's solution, for many years for a skin affection. She had attacks of acute neuralgia in groins, shoulders, and sides. These pains were considered due to arsenic by Sir James Clark, Dr. Robert Lee, and Dr. Copland, who all saw the case. Afterwards she lost all power over her lower limbs, which felt numb, although sensibility remained perfect. This retention of sensibility is at variance with other observers and experimenters. After death the abdominal and thoracic glands were found enlarged, and traces of arsenic were found in liver and lumbar vertebræ, although the drug had not been taken for more than seven months before death.

Colton[2] mentions the case of a patient who swallowed, accidentally, some arsenic, and was admitted to the hospital under Dr. Colton's care. The primary effects of the poison had been successfully combated with proper remedies. Seven days afterwards, when feeling quite well, he was attacked with violent cramps in index finger of right hand, spreading to other fingers, then to other hand, and finally to the feet. The pain in hands subsided as the feet became affected. The cramps lasted thirty minutes. He then fell into sound sleep, it being night, but in the morning he found to his surprise that he had lost the use of the affected parts. This paralysis had continued unchanged for five months. There was also a feeling of heat and numbness in the arms from the fingers to a little below the elbows, and in the legs from the toes to a little below the knees. Lancinating pains also occurred in those parts daily from five P. M. to midnight. He improved slowly under the use of quinia, strychnia, and electricity.

McCready[3] relates that a woman rubbed white arsenic mixed with gin on the head of her child suffering with favus. The child died in less than forty-eight hours with its legs completely paralyzed.

Maclagan[4] visited Styria in the year 1864, and had personal interviews with two "arsenikophagites," one of whom ate in his presence nearly five grains of arsenious acid, and the other nearly six grains. The urine of both of these men was carefully bottled and taken back to Great Britain, where a chemical examination revealed arsenic. The physiological effects on these toxicophagi are described as being only tonic and stimulant, especially improving the wind and increasing sexual desire. Maclagan's evidence is strong, yet perhaps not such as would be received in a court of justice, as the men were not kept continuously under observation. The point of chief interest is that he says nothing about paraplegia or any acute or chronic poisoning symptoms among these arsenic eaters.

Dr. Lloyd has called my attention to a case, not before reported, of suicide with arsenic, which happened some years ago in Bucks County, and was under the care of late Dr. Hendrie. Anæsthesia and paralysis were so marked that the man declared that his legs were cut off, and died in that belief.

[1] Neuralgia and Paraplegia, Supposed to be Due to Long-continued Use of Arsenic, etc. Transactions Pathological Society London, vol. ix., p. 442.

[2] Arsenical Paralysis. New York Journal of Medicine, September, 1850, pages 177, 178.

[3] Death from External Application of Arsenic. American Journal Medical Sciences, July, 1851, page 259.

[4] On the Arsenic Eaters of Styria. Edinburgh Medical Journal, 1864, page 200.

A CASE OF HEPATIC ABSCESS.

BY ISAAC F. GALLOUPE, M. D., LYNN, MASS.

A CASE in which two large abscesses occurred in the same liver, each finding vent by a natural but not the same passage, and ending in recovery, may not be unique, yet it is sufficiently rare, especially in this climate, to be worthy of record for the use of the future gatherer of statistics.

In this report I have purposely omitted all minor details, as they possess no special interest, and their relation would be tedious to the reader.

The patient was a widow, fifty years of age, who had never been out of New England. In the spring of 1872 she had an attack of hepatitis, from which she apparently recovered. In the fall of the same year she had an attack of "bilious colic," that nothing but a hypodermic injection of morphia would relieve. The conjunctivæ and skin became intensely yellow, — I may say without exaggeration that they were the color of gold; the urine and sweat were loaded with bile pigment, the bowels constipated, the discharges clay-colored, the intestines distended with gas, and the whole cutaneous surface affected with intense pruritus. These symptoms shortly diminished in intensity, except the discoloration of the skin, which, instead of fading out, became of a brown color, and the skin has gradually grown darker, until it is so black that were it not for her Caucasian features, the woman would readily be mistaken for a dark mulatto.

Other similar attacks occurred at irregular intervals, averaging one every three or four months until May, 1880, when one of unusual severity took place, accompanied by vomiting, dyspnœa, tenderness and distention of the whole abdomen, constipation, rapid and feeble pulse, and cadaveric countenance. After these symptoms had continued two weeks, and she had come to death's door, a large fluctuating tumor appeared at the epigastrium, and gradually became more prominent until evacuation through the abdominal walls was indicated, and aspiration was decided upon. Suddenly, while the patient was in a semi-comatose condition, pus began to pour from the rectum in great quantity and with great force; at least two quarts of bile-tinged pus were discharged within five minutes, and there was a constant but gradually diminishing flow for three or four days. The abscess had evidently opened into the colon. There was no vomiting after the evacuation of pus per anum began, but the tumor suddenly disappeared, and the condition of the patient improved daily for three weeks, when there was a sudden and profuse discharge of pus from the mouth through the bronchi, which nearly strangled the patient. This was followed by an incessant coughing that nearly destroyed life by fatiguing the patient and preventing sleep. At length

opiates were given in sufficient quantity to procure sleep, but the expectoration of pus continued four or five days before it ceased entirely. All the friends present agreed in the opinion that the quantity thus discharged through the bronchi was not less than four quarts.

The patient rapidly recovered a fair degree of health, which she has enjoyed to the present time, — a period of two years and eight months. The yellowness of the conjunctivæ and the brown color of the skin, however, have not diminished.

No calculi have been seen.

RECENT PROGRESS IN THE THEORY AND PRACTICE OF MEDICINE.

BY GEORGE B. SHATTUCK, M. D.

"LAVAGE ET GAVAGE." STOMACH WASHING AND STUFFING. ARTIFICIAL ALIMENTATION.

WITH the two words "lavage" and "gavage" the French medical slang of the day expresses the system of irrigation of the stomach and forced feeding, which Messrs. Debove and Dujardin-Beaumetz, among contemporary hospital practitioners, have done so much to reintroduce, to develop, and popularize. Since the introduction of the stomach pump in the early years of this century the process of washing the stomach has been practiced occasionally for various purposes, and especially in cases of poisoning, but it is mainly to Kussmaul and his first publication on the subject in 1867 [1] that a systematic application of stomach washing to diseased conditions, to digestive derangements, and particularly to dilatation of the organ, is due. Kussmaul used the stomach pump with its rigid tube.

In order to do away with the pump and avoid the possibility of injuries to the mucous membrane of the stomach attendant upon its use, various experimenters, and, among others, Somerville in this country, suggested the application of the siphon process. The next step was the substitution by Faucher, in France, of a soft, flexible rubber tube, which the patient could swallow himself. To this M. Debove added a somewhat flexible stylet, finding the introduction of the flexible tube facilitated thereby. With such a tube, four to five feet long, and of suitable diameter, a glass funnel, a pail, and additional tubing if desired, one has all the necessary apparatus for washing out the stomach and administering artificial alimentation.

The process of washing alone or of washing and feeding has been tried now in a large number of cases in Paris, both in hospital and private practice, especially by Messrs. Debove and Dujardin-Beaumetz, within the last two years, and is very favorably reported on by them and others in many cases of exhaustion from wasting diseases, as phthisis, of gastric derangement as from chronic alcoholism, of dilatation, and even of ulcer and cancer of the stomach when employed with due precaution and in proper stages.

For washing out the stomach tepid water simply or various alkaline solutions are used, as bicarbonate of soda in water, half a drachm to the quart, or sulphate of soda in water, a drachm and a half to the quart. For disinfection, where sarcinæ or an offensive odor are present, weak solutions of resorcin or boracic acid are recommended, and as a local calmative bismuth in water.

For alimentation M. Debove began at first to use minced meat simply or raw eggs in milk, but it was found impossible to mince meat fine enough for very rapid and easy digestion, and, moreover, the tube was liable to become stopped either in its course or at its extremity. To obviate these difficulties the minced meat is now dessicated by being subjected to a temperature gradually elevated to 120° C., and then reduced to a very fine powder. Six pounds of meat make only one pound of this meat powder. Where economy is an object the powder may be made, as for hospital use in Paris, from horse flesh; Debove has also used liver for this purpose, but it is too liable to changes. The powder may be administered incorporated in water, or milk, or bouillon, with eggs or without, but care should be taken to make an even mixture. Similar powders of lentils or of bread are administered when the nitrogenous diet is not indicated.

As to the kind and quantity of nourishment each case naturally offers its own peculiarities, and in general the maximum quantity of ingesta must be approached gradually. It is found that a quart of these food mixtures is as large an amount as the average stomach will support comfortably at one time. It is not unusual to wash out the stomach three times a day, and after each washing to administer a quart mixture of milk or bouillon with two hundred grammes of meat powder and three or four eggs. Two hundred grammes are about six and a half ounces, and that amount of powdered meat represents more than two pounds of the untreated article. Under this treatment many patients previously unable to take or digest food are said to thrive and gain rapidly in weight and strength. When the stomach shows signs of being oppressed by its burden it is considered good practice to insert the tube and withdraw a portion.

It is found after a few days that patients can perform the whole operation of washing out and feeding for themselves.

A few bibliographical references are appended.

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THE RELATIONS OF MICRO-ORGANISMS TO INFECTIVE DISEASES.

Prof. Ernst Ziegler, of Tübingen, in a text-book [2] just published, gives a judicious and intelligent résumé with a full bibliography of what is at present known about parasitic schizo-mycetes or bacteria,[3] and their relations to infective diseases. As Professor Ziegler is neither a partisan nor an enthusiast, we are glad to give the substance of a few of the more important passages from his chapter on this subject: —

[1] Schmidt's Jahrbüch., vol. cxxxvi., p. 386.

[2] A Text-Book of Pathological Anatomy and Pathogenesis, by Ernst Ziegler, Professor of Pathological Anatomy, University of Tübingen. Translated and edited for English students by Donald Macalister, M. A. M. B. London: Macmillan & Co. 1883.

[3] The word bacteria is used in the broad sense to represent the Schizomycetes or fissuring members of the protophytes or low form of vegetable micro-organisms.

The strongest point of evidence in favor of the organic nature of the poisons that produce the infective diseases is their power of unlimited reproduction and multiplication. Infection transmitted through the medium of the air (which certainly takes place), is scarcely to be explained if it be not that the air has had corpuscular particles suspended in it. Chemically active gases would very quickly become diffused through the atmosphere, and at short distances would become attenuated beyond the power of doing mischief. The small quantity of infective matter required to set up the corresponding disease is another point in the evidence. The extraordinary potency of the matter can only be explained by the theory that the virus is reproduced and multiplied within the organism.

The researches of the last ten years have shown that there are, in addition to a multitude of non-pathogenous bacteria which beset the healthy organism, pathogenous bacterial fungi, which are able, by virtue of their specific properties, to affect the animal body and generate disease in it. On the other hand we find such fungi in the blood and tissues of persons affected with infective disease. We must admit beforehand that the available observations on this head have not the extent or exactness which we could desire. Only in the case of a few diseases is the bacterial nature of the virus demonstrated by indefeasible histological and experimental investigation. Such diseases are septicæmia, erysipelas, splenic fever, and tuberculosis. In others, and the greater number of the diseases now referred by many to the action of micro-organisms (such as typhoid, relapsing fever, diphtheria, the exanthemata, croupous pneumonia, acute atrophy of the liver, cholera, etc.), the presence of bacteria has been demonstrated in single, or, as with relapsing fever, in a very large number of cases,[1] but their causal relation to the disease has not been proved, either because the disease itself has not been typically reproduced by inoculation or because the inoculation virus has not been shown to be the result of an absolutely pure culture.[2]

In many other diseases neither the presence of micro-organisms nor their causal relation to the disease have been hitherto made out. As the question at present stands, then, we can only say, that among the infective diseases there are certainly some which are due to the invasion of a microphyte, and that it is highly probable that others have a like origin. Two factors, a proper microphyte and a proper medium, are necessary to produce a given result. If the microparasitic theory be correct, we must admit that some of the pathogenous bacteria usually develop and multiply without the body, while others usually do so within it.

The defective state of our knowledge makes it impossible at present to give a definite answer to the question of the mutability of bacteria. Koch's culture-experiments lead him to the conclusion that the pathogenous like the non-pathogenous bacteria do not alter in their properties. After cultivation for many generations the same developmental forms continually recur, and their physiological properties remain in every respect the same. A change from time to time in the nutrient medium produces no recognizable differences. Koch does not dispute that mutability of species is possible among bacteria, but holds that no adequate evidence has yet been brought to prove it.

[1] Reporter.
[2] Reporter.

Among clinical observers some even go so far as to assert that mutability of species is impossible.

Naegele, Davaine, Buchner, and Wernich, have argued from their experiments against Koch's position. The experiments of Koch and his associates do not as yet prove that the properties of bacteria examined by them are perfectly constant; they only show that the morphological and physiological qualities possessed by a bacterium at a given time are retained by it with some tenacity, even when a certain amount of variation takes place in its environment. Some of the conclusions of their opponents, as the transformation of the hay bacillus (bacillus subtilis) into the splenic fever bacillus, have been discredited, and their researches show at the most no more than that one or other of the properties possessed by a biological species of micro-organism may be brought into prominence by proper modifications of external conditions, but do not indicate that one species may be transformed into another.

The mutability capable of being manifested by a given bacterium may, in the present state of the investigation, be said to have definite limits. It cannot in any period of time within the extent of our observation acquire properties different from any of those possessed by the species to which it belongs. As to the extent of the cycle of varieties through which any one of the known bacteria may pass, we know, indeed, but little. It is possible that the properties of many of them admit of only the slightest variations from those with which we are acquainted. It is, moreover, probable that many of the varieties known to us constitute true biological species.

We may provisionally conclude that the transformation of innocuous into noxious bacteria can occur, if at all, but rarely, and under special conditions. In other words, the pathogenous micro-organisms, even if they do not represent biological species, are wont to maintain the pathogenous form for long periods of time.

We are not yet in a position to formulate a theory of *bacterial action* that will apply to all cases. In general it may be said that pathogenous bacteria withdraw their nourishment from the tissues among which they are growing and multiplying, and from these only; they interfere with the nutritive activity of the tissue cells, and oppose a foreign fermentive action and ferment products to those of the tissue cells.

The effect of withdrawal of nourishment only becomes dangerous to life when bacteria multiply within the circulating blood and withdraw indispensable oxygen. The struggle between the catalytic action of the tissue cells and of the bacteria is carried on to the triumph and destruction of one and the other of the opposing agents. In the investigations of Toussaint, Pasteur, and Koch with regard to the attenuated inoculation virus of splenic fever, it is well known that carbolic acid, oxygen, and temperature all influence the activity of this bacillus, and Koch sustains the belief that the products of extreme activity of the bacillus, favored by oxygen and a not too elevated temperature, bring about in turn an attenuation and destruction of the parasite. In these well-established experiments and theories suggested by them we find a clew to self-limited diseases, to the influence of cold, of antipyretics, and antiseptics, whether hyperpyrexia be the result of changes in the tissue cells or direct action of the nerve centres.[3]

[3] Reporter.

For the processes of investigation now followed by Koch and his school, and the guarantees which these offer for reasonable theorizing, one may consult with advantage the admirable Opening Cartwright Lecture, by Dr. W. T. Belfield,[1] and Koch's pamphlet addressed to Pasteur, of which a brief abstract was given in this journal.[2]

MALIGNANT ŒDEMA IN TYPHOID FEVER.

"Koch has occasionally found in putrefying matters a bacillus which produces in animals an affection resembling splenic fever. He describes the affection as malignant œdema, and the bacillus as 'bacillus œdematis.' It is fatal to mice and guinea-pigs. The site of inoculation becomes œdematous, and is beset with bacilli. These spread into the serous cavities, but, except in mice, the blood remains free from them. . . . The bacilli are somewhat narrower than splenic fever bacilli. It is possible that the bacilli found in certain affections due to poisonous meat are œdema bacilli." (Ziegler.) This affection and bacillus has been supposed to be confined to animals. Messrs. Brieger and Ehrlich,[3] however, think they found this disease causing a fatal termination in two cases of typhoid fever following subcutaneous injections of tincture of musk on account of threatened collapse. Œdema spread from the points of injection over the upper and lower leg, death resulting in three or four days. Offensive gas and bloody serum found exit upon incision of the parts. These observers found, they think, the characteristic bacillus in the liquid, and produced the characteristic disease by injecting this liquid into guinea-pigs. This bacillus differs from that of splenic fever, it is said, in being somewhat narrower, a slender margin on which to base the first appearance in man of an affection hitherto rather ill defined even in animals, especially as the methods employed would seem to lay the reporters open to some of Koch's reproaches to Pasteur. We shall not at present add "malignant œdema" to the dreaded complications of typhoid fever, even after the subcutaneous injection of tincture of musk, should we ever be tempted to use that form of stimulant.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

C. M. JONES, SECRETARY.

DECEMBER 18, 1882. DR. DENNY presided.

A TYPHOID PATIENT ARRESTED FOR SUPPOSED DRUNKENNESS.

DR. MCCULLOM spoke briefly of a case now under his charge. The patient was found wandering about in a delirious, stupid condition, and was arrested for supposed drunkenness; but though he had been drinking, and, as subsequent inquiry showed, drinking habitually, leaving his bed to get to the saloon, the stupor and the delirium did not arise from the liquor taken, but from disease. He has now the stupor, the delirium, the retention of urine, and other symptoms which make the diagnosis of typhoid fever unmistakable. Such an error might occur without fault, and although the patient was transported about, and not at the outset put under medical supervision, no blame could be attached to any one in connection with the case.

DR. DRAPER spoke of the frequency with which one sees in English journals the heading "Drunk or dying," and contrasted the recklessness or the stupidity so often displayed there with the greater care taken in this country. In England apoplexy is found to exist quite often in cases of supposed drunkenness, but such a condition occurs here very rarely. The police do not take risks, but if a case does not pursue the course of an ordinary drunken fit medical aid is speedily summoned, and every precaution taken. During the last six years not more than two cases have been recorded where a post-mortem examination showed apoplexy to have been mistaken for drunkenness.

DR. MCCULLOM said he had known two cases of typhoid previous to this one where the patients had been arrested for alleged drunkenness. In both these the arrests were made at the request of friends because the patients were believed to have delirium tremens, and were uncontrollable.

DR. ROTCH read the regular paper on

ACUTE INFANTILE PERITONITIS, INCLUDING A CASE OF PERITONITIS FOLLOWING CHEESY DEGENERATION OF THE MESENTERIC GLANDS, OCCURRING IN AN INFANT EIGHTEEN MONTHS OLD.[4]

DR. BOWDITCH said that notwithstanding his experience in autopsies had been very large, he had never seen such a case as that recorded by the reader. He wished to know in regard to the frequency of such cases. There seemed to have been present all the symptoms and clinical appearances of general tubercular disease. Was a thorough examination of the lungs made with reference to the existence of tubercular trouble in that organ?

DR. ROTCH replied that no other trouble was present, and no other cause for the disease than that assigned could be found. He had known of no other case where the disease had been ascribed to this cause, and in this respect his own case was unique in literature.

DR. INGALLS asked for more definite information in regard to the facial expression in these cases.

DR. C. P. PUTNAM said in regard to his own case that in looking at it after the autopsy, and comparing the symptoms, it might seem that the diagnosis should have been made; but each individual symptom may occur in other diseases, nor is the grouping characteristic. The face had simply the usual expression of abdominal disease, the same as in enteritis. It was drawn and pinched, distressed. Diarrhœa also may occur in this disease, but constipation is more common.

DR. ROTCH spoke of the great rarity of the disease in infants. Most of the recorded cases of peritonitis in children are from seven or eight years and upwards, and each case should be reported as fully as possible in the hope that we may eventually get some signs or group of signs which will enable us to make an early diagnosis.

DR. WHITNEY said that he was very skeptical as to the occurrence of cases of acute purulent peritonitis, such as that described by the reader, without any assignable cause. When he was unable to find the cause post mortem he was more inclined to believe that he himself had overlooked it than that it did not exist, especially since our field of causation was so much

[1] New York Medical Record, February 24, 1883.
[2] January 18, 1883, page 64.
[3] Berliner klin. Wochschr., No. 44, 1882. Centralblatt. für klin. Med., No. 3, s. 45, 1883.

[4] See page 268 of this number of the JOURNAL.

enlarged by the intimate relation in which the micro-organisms stand to such purulent processes.

The fact that the glands in this case had not only become cheesy, but had caused a neurosis of the tissue in their neighborhood, suggested that there was more of a septic process in this case, the usual course being a dry caseation or calcification.

As regards the possibility of this being tuberculous instead of simply hyperplastic, he had been unable to find the ordinarily recognized miliary tubercles either here or in other organs. If, however, we are to regard, with Koch, that all cheesy degeneration is to be considered as due to the agency of the same bacillus as is found in miliary tuberculosis, our conception of this process would have to be as comprehensive as that of Louis and Laennec. In the specimen here he had been unable to convince himself of the presence of a specific organism, but as yet he had not been successful in detecting it in tissue, although it was easily found by double staining (Ehrlich method) in the sputa of consumptives.

DR. ROTCH, in reply to an inquiry by Dr. Gannett, said that it was a characteristic of these cases that the bowels were not distended, and this lack of tympanites rendered the diagnosis more difficult. If one should find a distended and tender abdomen, with constant vomiting, one would be more likely to think of peritonitis.

DR. GANNETT said that in certain cases of autopsy after death from cholera infantum he had found the abdomen very much distended. He had ascribed the distention to the acuteness of the disease. The autopsies had been made about twelve hours after death, during the summer, but the cadavera had been kept on ice.

DR. MCCULLOM said that distention of the abdomen before death had been rare in his cases of cholera infantum, or, in fact, in any case of abdominal disease, and he suggested that the distention might be due to post-mortem generation of gases in the intestines.

DR. PUTNAM said that it probably depended on whether we had to deal with an acute or chronic disease. When a child has chronic enteritis, and dies suddenly, the conditions are entirely dissimilar from those occurring in an acute case. In the sudden collapse of a comparatively healthy child the abdomen is sunken. Otherwise it is likely to be distended. It is quite common for physicians not to distinguish the various forms of diarrhœal disease in children, but to confuse them all under the term cholera infantum.

DR. DENNY said the allusion of Dr. Whitney to the agency of bacilli in the causation of disease suggests a field of study which seems to promise an eventually satisfactory solution to the obscure pathological problem involved, not only in the case reported, but in others where certain caseous, purulent, or any foreign deposits occur, without sufficient explanation from generally received doctrines.

The fact appears to be pretty well established, as shown by the recently published report of Professor Arnould,[1] that foci of disease may be artificially produced by the experimental cultivation and inoculation of various micro-organisms, as bacilli, micrococci, microbes, penicillium, mycelium, etc.

Thus, according to Arnould, Recklinghausen first discovered micrococci in purulent deposits found in typhoid fever in 1871, and Klebs furthermore gave the name of "bacillus typhosus," somewhat prematurely, to a micro-organism, which he cultivated and produced experimentally, and found in the blood-vessels, larynx, and in necrosed masses of the intestines. Likewise Letzerich recognized "typhogenic cocci" in the blood, connective tissue, and parenchyma of the liver, kidney, intestinal walls, spleen, and lungs, while Brautlecht injected fluids presumed to contain "typhoid bacilli," subcutaneously into rabbits, and produced intestinal inflammation, tumefaction of the spleen, mesenteric glands, and Peyer's patches.

Furthermore, Wernick even ventures to affirm that a "bacillus typhosus," that, he says, is inoffensive when it does not pass beyond the large intestine, the walls of which it cannot penetrate, may, under favoring circumstances, reach the small intestines, penetrate its glands, and so attack the spleen, liver, and other tissues.

It does not appear that the characteristic features of typhoid fever are thus reproduced, and Arnould does not think that we are yet warranted in saying that there is a typhoid parasite, but the inference seems justifiable I think, that bacilli and various micro-organisms may, under certain conditions favorable to their cultivation within the human body, act as foreign bodies, and thus set up irritative lesions in an obscure manner, especially in the intestinal tract and its appendages, which may be marked by pathological deposits of various character.

Thus Arnould states that these micro-organisms have an almost indefinite aptitude to vary their properties according to the conditions of their environment under the influence of certain external agencies.

It is not improbable that the microscopic search of purulent or other foreign pathological matters, as in the case detailed, for microbotanic organisms, etc, will some time reward us with a clearer ætiology, as well as promote the efficiency of our hygienic and therapeutic measures.

DR. BOWDITCH asked for a statement as to the amount of confidence which should be placed in the published results of Koch's investigations into the bacillus of consumption. Can we accept it as an established fact that such a germ exists and is the cause of tuberculosis, or is the disease merely the habitat? If consumption is due to the bacillus, it seems that we ought to find more evidence of active contagion than at present appears. While he believed that consumption was contagious to a certain extent, yet this feature is not well marked or easy to demonstrate. The general and symptomatic evidence is rather against the existence of such a microscopic germ as a cause of tuberculosis.

DR. WHITNEY in reply gave a brief recapitulation of the experiments of Koch, many of which had already been confirmed by other observers, and considered that they showed quite positively that a specific germ in tuberculosis does exist.

Adjourned.

[1] Etiologie et Prophylaxie de la Fiebre Typhoide. Rapport fait au quatrieme Congrés International d'Hygiene en Septembre, 1882. Par le Dr. Jules Arnould, Professor de Faculte de Lillé. Annales d'Hygiene Publique, etc. Septembre, 1882.

— Philanthropic old lady: "So you have got twins at your house, Johnnie." "Yes 'm, two of 'm." "What have you named them?" "Thunder and Lightning, ma'am." "Why, what very singular names!" "Yes 'm, that 's what pa called 'm as soon s he heard they were in the house."

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL SCIENCES.

W. W. GANNETT, M. D., SECRETARY.

DECEMBER 19, 1882. DR. AMORY presided.
DR. BOWDITCH showed

BELL'S INDUCTION BALANCE AND ELECTRIC PROBE FOR THE DETECTION OF BULLETS WITHIN THE BODY.

The former Dr. Bowditch explained as consisting of a perfectly adjusted induction balance, having two large coils firmly imbedded in paraffine and set in a convenient wooden handle. A smaller pair of coils, movable upon one another, allows of adjustment of the apparatus.

In use, the current from six cells is passed through the large primary coil and one of the smaller coils, a double interrupter being placed in the circuit.

The wires from the large induction coil are connected through the other small coil with a telephone.

Adjustment is obtained by holding the large coils away from any metal; then with the telephone to the ear the smaller coils are moved upon one another till no sound is heard. If now the handle containing the larger coils be brought into the neighborhood of bits of lead or other metal, a musical note is heard caused by the interrupter in the primary circuit.

Bullets buried in meat were readily detected, and a piece of a sewing-needle six millimetres long produced a distinct sound when held one inch from the coils.

The electric probe consists of a long steel needle connected by a wire with a telephone and a thin steel disk similarly connected.

In use, the steel plate is moistened and placed beneath the suspected part. The needle is then thrust into the flesh, and on touching a metallic object (like a bullet) a sharp sound is heard in the telephone, owing to an electric current being established, the bullet and the steel plate forming the two poles of a battery.

Dr. Bowditch mentioned two cases where the situation of a bullet within the human body had been determined by means of the induction balance.

In reply to questions Dr. Bowditch said that the electric probe was of advantage only in distinguishing between bone and metal; further, that in using the induction balance it made no difference in the sound produced whether the bullet or like was imbedded in muscle or not.

The regular business of the meeting was a discussion on

THE RELATION OF THE GERM THEORY TO SURGICAL PATHOLOGY,

Drs. J. C. Warren, Fitz, and Whitney, being those appointed to take part.

DR. WARREN gave some account of the present knowledge of the relation of bacteria to inflammation, abscess, septicæmia, and pyæmia; stating the views of Burdon-Sanderson, Cheyne, Pasteur, Koch, Chauveau, Billroth, and others; the general weight of evidence going to show that they were to be found in the infectious inflammations; in acute diseases; in septicæmia and pyæmia; but that a specific character could be given to the organisms found in these diseases in man was not yet established, although Koch and others maintained a specific bacterial origin for some of these diseases in animals.

DR. FITZ said that the difficulty of associating specific germs with specific diseases was very great.

Numerous experiments with reference to the solution of such problems have been made on lower animals, but neither now nor probably in the future can there be opportunities afforded for thoroughly controlled experimentation on man.

The recent great advance in our knowledge of the subject is the result of the investigations by Koch, who has shown that it is not only necessary to *discover* organisms in disease but also to *identify* them in their varying conditions.

In the recognition of the tubercle-bacillus the color-reaction is the ultimate test, and unless all the conditions for its performance, especially the strength and purity of the reagents, are adhered to the reaction is not obtained. That there is an opportunity for the application of much ingenuity in such investigations is apparent.

Bacilli may be of the same form and size and yet have different properties. Further, one must be sure in cultivation that there are no contaminations; hence the importance of suitable soils and of a solid medium in particular is apparent, for by the latter means one can isolate and cultivate purely. It is possible, in certain cases, by inoculation of such distinct micro-organisms to produce certain diseases.

Wood and Formad have maintained the idea that the ordinary micro-organisms of putrefaction are sufficient, under proper conditions, to produce diphtheria; if this claim is admitted, it is obvious that a well-characterized disease is the result of complex agencies rather than one well-characterized.

As a general conclusion it may be said that unless all of Koch's conditions are fulfilled one can only say that the bacteria and the disease are associated.

The endeavor to discover a specific organism as the cause of the diseases of wounds has led to the isolation of a microbe which occasions erysipelas.

It has been observed that thrombi forming in vessels treated with Lister precautions are eventually replaced by fibrous tissue without local or general disturbance, whereas putrid softening results if the wound is besmeared with putrid material. It is to be said, however, that no one has yet recognized a specific micro-organism as a cause for this softening, although numerous organisms are present in the putrid material. As no specific cause for the putrid softening is isolated, so no distinctive organism for pyæmia or septicæmia in man is found.

In suppurative processes, whether on surfaces or in deeper tissues, micro-organisms are frequently found, and, if present at all, must come from without. But apparently the presence of such organisms is not a necessary factor in suppuration, as has been shown in the cases of inflammation resulting from the injection of petroleum beneath the skin.

Although specific organisms are admitted as a cause of certain diseases, it is obvious that in putrefactive processes there are numerous varieties of microbia, and it is necessary to determine the effect of each, isolated, before the relation of putrefaction to disease can be determined.

DR. WHITNEY mentioned some of the difficulties encountered in investigations upon lower organisms, and described several of the methods of staining such organisms, more especially with reference to the bacillus of tuberculosis.

Dr. Whitney also exhibited a preparation showing the bacilli, stained with methyl-blue, which Koch considers to be the specific organism of tuberculosis.

Meeting, January 16, 1883. The regular paper of the evening was by Dr. Wadsworth on

THE APPARENT CURVATURE OF SURFACE CAUSED BY PRISMATIC GLASSES.

Dr. Bowditch opened the discussion by saying that, "The manner in which our judgment of the size of visible objects depends upon our estimate of their distance may be illustrated by means of stereoscopic figures. If we draw upon a card two pairs of stereoscopic diagrams representing similar truncated pyramids, with their smaller ends turned in one pyramid toward, and in the other, away from the observer, it will be found, when the figures are viewed through a stereoscope, that the truncated end appears smaller in the former than in the latter pyramid, although in the diagrams they are of precisely the same size.

"The illusion depends upon the fact that, since the two truncated ends subtend the same visual angle, the one which is at a greater apparent distance must be supposed to have a greater absolute size. In this case the illusion is helped by the circumstance that the two pyramids, though drawn on the same card arc, do not form part of the same diagram. Hence no very direct and close comparison of the size of the truncated ends is possible. The illusion persists, however, in the case of a single stereogram representing two truncated pyramids or cones placed base to base, and having the line joining the centres of the two truncated ends, forming a small angle with the line of vision. In this case the two truncated ends appear side by side, and therefore in the best possible position for judging of their comparative size. Although drawn of precisely the same size in the diagram the more distant end seems invariably the larger. Even when the figures are so drawn that in one of them the two squares representing the truncated ends have one side in common, the illusion is not disturbed, but if the axis of the pyramids so nearly coincides with the line of vision that the two squares overlap each other to any considerable extent, the illusion is greatly weakened, though not wholly lost.

"Figures of this sort illustrate the principle that the size of the retinal image, when uncombined with any knowledge of the distance of the corresponding object, furnishes little or no information as to its absolute size."

SPECIMENS OF TUMORS AND DISSECTED NERVES.

Dr. J. J. Putnam gave the clinical history, and showed the specimen of a case of glioma of the pons Varolii; also showed several microscopic sections of the tumor.

Dr. M. H. Richardson showed a dissection of the superficial nerves of the hand.

The skin is removed entire, like a glove, being turned inside out by the process. By this means the nerves may be traced to their terminations, affording, at the same time, a good opportunity for observing the Pacinian bodies.

Dr. Richardson also showed a hypoglossus nerve having a ganglion at the point where the nerve passes beneath the digastric muscle.

A vagus with an enlargement at the point where the recurrent laryngeal is given off was also exhibited.

Dr. J. C. Warren showed microscopic specimens of a xanthoma removed by him from the eyelid of a patient of thirty-five years of age, and gave, in connection with them, an account of the various views held as to the nature and origin of these growths.

Dr. Warren also presented microscopic sections of a tumor of the parotid, of six months' growth, which he considered to be a cancer.

EXPERIMENTS WITH ARTIFICIAL DIGESTIVE AGENTS.

Dr. Edes showed the results of some experiments made with artificial digestive agents.

Solutions, containing each one half gramme of saccharated pepsin, ingluvin, and lacto-peptine were added to equal amounts of egg-albumen. In the case of the pepsin the albumen was soon dissolved for the most part. In the case of the two remaining agents no soluble effect upon the albumen was to be observed.

Recent Literature.

Die Allgemeine Elektrisation des Menschlichen Körpers. Elektrotechnische Beiträge zur ärztlichen Behandlung der Nervenschwäche (Nervosität und Neurasthenie) sowie verwanter allgemeines Neurosen. Von Sigmund Theodor Stein. Halle. 1882. Pages viii., 73. [General Electrization of the Human Body. A Contribution to the Technical Study of the Medical Use of Electricity in treating Nervous Weakness and allied Neuroses.]

Any one who has Beard and Rockwell's work on Electricity will not need this. Dr. Stein simply gives an account of their methods of general electrization, adding thereto a description of the electrical bath and the use of static electricity for the same ends. He considers central galvanization unnecessary.

A Dictionary of Medicine, including General Pathology, General Therapeutics, Hygiene, and the Diseases Peculiar to Women and Children. By various writers. Edited by Richard Quain, M. D., F. R. S. New York: D. Appleton & Company. 1883. 1816 pages.

The Medical Dictionary of Dr. Quain is something more than its title would at first indicate. It might with equal propriety be called an encyclopædia. The different diseases are fully discussed in alphabetical order. The description of each includes an account of its various attributes, often covering several pages. Distinctly surgical matters are not included in the book.

The book has been edited with the greatest care with the intention of preserving the unity of the volume, a matter not always easy, when many authors unite. The articles are condensed with very great care and are signed, so that the reader knows on whose authority he is asked to accept the statements.

One must not expect in this single volume the exhaustive articles of the *Nouveau Dictionnaire* or Ziemssen's Encyclopædia, but he will find the modern ideas on various subjects tersely put by men whose names are a guaranty of the truthfulness of their work.

The list of contributors is a striking one. The names of those who have already been taken away by death since their articles were written will serve as an index to the character of those who survive. Edmund Parkes, Charles Murchison, George Callender, Thomas Bevill Peacock, John Rose Cormack, Lockhart Clarke, Tilbury Fox, Thomas Hayden, Harry Lerch, Alexander Silver.

Any attempt to discuss the separate articles seems superfluous. Although we have possessed the book only the short time since its publication, its loss would leave a void we should not know how to fill.

Twenty-Ninth Report upon the Births, Marriages, and Deaths in the State of Rhode Island for the Year ending December 31, 1881. Prepared by CHARLES H. FISHER, M. D., State Registrar of Vital Statistics. Providence. 1882.

This volume, while somewhat late in making its appearance, presents a careful record and classification of the vital statistics of the State. From it we note that the male births were considerably in excess of the female (3498 to 3263). There were 64 cases of plural births, one of them being triplets. The deaths numbered 5016, more than a quarter of which were caused by diseases of the lungs and respiratory passages. In 1881, as in every other year since the beginning of registration, consumption heads the list. Pneumonia stands second in order, as it has every year with two exceptions. Diseases of the heart and diseases of the brain have been gradually increasing as causes of death, the former taking the third place in 1881, and the latter the seventh. Croup has diminished in importance as a cause of death. The proportion of deaths under five years of age (32.8) was less than during any previous year recorded. Of the decedents over twenty years old the average age was 52.94. The aggregate numbers are not great enough to give much significance to the average longevity represented by most of the different occupations, but we may notice that the physicians averaged 66.37, the lawyers 61.50, and the clergymen 68.17.

We are particularly struck with the figures regarding divorce, especially in view of the remarks recently published from the Rev. Dr. Dix, of New York, in relation to the laxity of the marriage bond in New England. There were 268 divorces granted during the year, being one for every 10.4 marriages. The ratio of applications for divorce was one to less than every eight marriages. This proportion shows an almost constant increase since 1869, the first year that these returns were included in the registration reports. Of the 503 causes for divorce alleged in the 268 applications that were granted adultery comprised only 71.

Transactions of the Thirty-Second Annual Meeting of the Illinois State Medical Society held at Quincy, May 16–18, 1882. Chicago.

This is a handsomely printed and bound volume of 275 pages, and gives evidence of being the product of a healthy organization. The prominent part which has been taken by the Board of Health of Illinois in exposing incompetent practitioners and unearthing fraudulent transactions in diplomas is supplemented by three papers which were read at this meeting of the Society on Medical Education and Legislation, showing a most commendable disposition on the part of the profession to compensate for the slackness in these matters which prevail in some of the Western States.

Herbert Spencer on American Nervousness. A Scientific Coincidence. By GEORGE M. BEARD, A. M., M. D. New York: G. P. Putnam's Sons. 1883. 17 pages.

The chief interest of this little brochure is that it is virtually a posthumous work, perhaps the last which the author wrote. It is a comparison of Mr. Spencer's views as expressed in his speech, published in the *Popular Science Monthly* for January, 1883, with previous publications of the author. Besides this comparison there is mention made of the slowness and difficulty with which his views have been received.

THE APPROPRIATION FOR THE ARMY MEDICAL LIBRARY.

THE *Medical News* thus comments on the recent action of Congress on this subject: —

"In the debate upon the Army Appropriation Bill in the Senate, the amendment proposed by Mr. Logan to reduce the usual appropriation of $10,000 for the Army Medical Museum and Library to $5000 was stricken out, and on motion of Senator Conger $7000 was allowed for the Library, and $3000 for the Museum.

"The debate showed that few of the honorable senators knew anything definite about the Library or Museum, although we were glad to see that there was a general impression that they were valuable and useful. A letter from Dr. Billings to the surgeon-general was read, in which, among other things, it was stated that 'the demands upon the Library for books and information are steadily increasing, and there is not a week during which some books are asked for which it does not possess. During the past year, under the regulations which permit of the loan of books to other responsible libraries, books have been loaned to Boston, New York, Philadelphia, Baltimore, Chicago, Cincinnati, St. Louis, and other places, for use by physicians in those places.'

"Upon this Senator Logan commented as follows: 'That is not the way for the government money to be used, buying books to be distributed around over the country for the use of other people. If they want them let them go to the Library and examine them.'

"We should like to know what Mr. Logan means by 'other people.' He seems to forget that the government in this country is the people. We hope that some of his medical constituents will enlighten him in the course of the summer. They might also remind him that it is only asked that the books be put in the Government Library. All the expenses attending their use in other places than Washington are borne by the 'other people.'

"The result of the Senate's action is satisfactory as far as the Library is concerned, but the Museum gets too little. The two institutions should have together $15,000 per annum to make and keep them what they ought to be."

Medical and Surgical Journal.

THURSDAY, MARCH 22, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

POOR-HOUSE TREATMENT FOR LUNATICS.

As almost all of our readers know, our insane hospitals are now as full of patients as it is best they should be, and the question of further provision for the insane already demands consideration.

The existing hospitals being in most cases very well adapted for the treatment of acute cases of insanity, it is but natural to regard the chronic insane as the class which will need increased hospital accommodation first. To accomplish this purpose various plans have been suggested, such as enlarging our present hospitals, putting up separate buildings on our hospital grounds, building special, distinct hospitals, and utilizing a portion of the various alms-houses.

The last method of provision for the chronic insane, which is occasionally brought forward on account of the ease and economy with which it can be carried into effect, is the one that we shall speak of here.

Those persons who have the least practical acquaintance with the management of the insane are the ones who usually advocate this plan. Hospital medical officers and hospital trustees and managers, who have the direct care of the insane, are, as a rule, strongly opposed to placing the chronic insane in any institution other than a well-managed insane hospital.

Of the correctness of this opinion we have had numerous proofs in times past. Its latest confirmation we have found in a Report on the Chronic Insane in Certain Counties exempted by the State Board of Charities from the Operation of the Williard Asylum Act by Commissioners Letchworth and Carpenter. This report concerns the chronic insane of New York, and is made to the State Board of Charities by two of its members.

These persons, a lady and gentleman, were appointed to visit and make a report upon the condition of the insane departments of poor-houses in counties exempted by the Board from the statute requiring the chronic insane to be transferred to the Williard Asylum, and they visited these departments in sixteen different counties, with an insane population of 1286. In every county but one the insane department was an integral part of the poor-house establishment, being under the same financial and general control.

The total number of epileptics was seventy-seven. There were fourteen suicidal cases and thirteen homicidal cases.

The total number of crib-beds found was thirty-nine. There were thirty restraining chairs, forty-eight muffs, forty-three camisoles, thirty pairs of handcuffs, eight pairs of shackles, and forty-six pairs of wristlets and waist-bands. This makes a grand total of two hundred and forty-four pieces of restraining apparatus, or more than enough to restrain a fifth, or twenty per cent. of the whole. The Commissioners state that they found only thirty-seven persons actually restrained at the time of their visit; but as so much restraining apparatus implied the use of a free amount of restraint, they regarded it as best to discourage its use. When we see further on in the report how very small the number of attendants was in these poor-houses, and how little medical supervision was exercised over them, we can easily understand how such an immense amount of restraining apparatus might easily be brought into play (?) by the ignorant but perhaps well-meaning poor-house superintendent or keeper. We can also imagine how much suffering and abuse the unfortunate insane might be exposed to.

Theoretically these poor-houses are under medical supervision to a greater or less degree, that is, a doctor makes a visit once, twice a week, or daily, or when he is sent for, but he has no voice in the direct management, and his influence is not felt much more than that of any outside physician, we should judge, from the reports of the various poor-houses. In Oneida County, for instance, where there are in the insane department to the poor-house two hundred and seventeen patients, the attending physician is non-resident, is appointed by the poor-house superintendent, and beyond seeing all the almshouse inmates daily and giving them medical treatment, has little, if anything, to do with the management. The superintendent and matron attend to all details; the former arranges the dietary, and the attendants apply restraint, using for the purpose six cribs, four muffs, two camisoles, and straps and strong chairs. When restraint has been applied the attendants report *afterward* to the superintendent.

In twelve of the poor-houses there was no record of a medical nature. In two the patients were found locked up and left alone without attendants, like the children of an Irish woman who has gone out to do a day's washing. Most of the insane departments, with barred and grated windows, studded doors, heavy padlocks, high plank fences, etc., looked more like prisons than asylums for the insane. In many the drainage, heating, ventilation, and water supply were defective. The airing courts were small and contracted, with high fences that the insane could not see over. With the exception of four counties, in which the patients were allowed to play ball and quoits, no out-door recreation or amusement was furnished to either sex. In some counties the sexes were not properly separated. For instance, in the Chautauqua County Poor-House, the insane department of which contained eighty-one patients, and of which a record of filth and vermin is given by the Commissioners, the men's airing court and the women's ward were so arranged that at the time the Commissioners' visit was made the women were able to look down on to several half naked and indecently exposed men.

Further examples of the deplorable condition of many of these New York poor-houses might be given, but it is unnecessary in this place.

The Commissioners, in summing up their conclusions, state "that with few exceptions the care of the chronic insane in the counties does not attain to a just and proper standard. In some counties the deficiency is lamentable." But they add that the Williard Asylum Exemption Act is only a *temporary* measure, which excuses some of the shortcomings of the poor-house authorities. The State insane hospitals have never been able as yet, the Commissioners state, to provide for this large number of the chronic insane still remaining in county poor-houses.

It is the opinion of the Commissioners that the chronic insane should be cared for in institutions entirely separate in every way from poor-houses, which should be managed by a resident medical superintendent having the appointment and entire control of the subordinates.

We can say very positively, from our knowledge of the care of the insane in the past and at present, that as soon as any institution for the insane passes out of proper medical hands, as a rule, it begins to retrograde, and the tendency is always downwards until medical management is again resorted to. Insanity being a disease it seems to require the peculiar knowledge and experience gained by medical training to make its proper treatment understood. The lay world at large, though so jealous of the rights of the insane, does not always take the most humane and enlightened view of the form of public hospital provision their disease entitles them to.

APARTMENT HOUSES IN NEW YORK.

THE recent burning in New York of the "Cambridge" apartment house, with the loss of two lives, has directed general attention to the dangerous condition of many of this class of buildings, of which there are such vast numbers in that city, not only as regards fire, but also from a sanitary point of view. The manner in which such houses are sometimes put up and rented is thus graphically described by a builder in Harlem, a part of the city to which there is now coming a large influx of population: "We will suppose that a speculator wishes to commence operations. He first buys say from four to six lots of land, worth, perhaps, $50,000. He then contracts with a builder of the 'cheap and nasty' kind to build him a row of five double flat-houses, containing fifty flats in all. The walls just meet the requirements of the building law, but shave it as closely as they dare. The floors are made of bad timber, hastily put together. The inner decorations are cheap but gaudy, and the plumbing is criminally bad. In the centre house of the row a gold and blue sign is placed, which has 'The Garibaldi,' 'The Muldoon,' or some other high-sounding name upon it. A flag surmounts the whole structure, and tenants pour in, attracted by all the gold and glitter. If the building does not tumble down the people usually die from disease of some sort contracted through the lack of proper hygienic precautions. If, however, a fire breaks out they burn like rats in a hole, because fire-escapes are worthless in a shell of that kind. When this 'Muldoon' is finished the builder takes a mortgage on it for half its value as payment for his labor. The owner puts a second mortgage on the building for all he can get, and with the money on hand commences building another row of bad flats." Even many of the higher class apartment houses are open to many of the same objections. In speaking of them Dr. Edward H. Janes, the assistant sanitary superintendent, recently said: "One great difficulty with them is that they shade the streets too much. Their massive walls tower up a hundred feet into the sky, and, as I have had occasion to notice, two of these great buildings often face each other on a narrow street, so that it is impossible that the sun should get to their lower floors. The law upon this matter is a wretched one. It merely gives the Board of Health authority to require that 'air and light be furnished to all floors in any house where more than one family are living.' When a plan is brought to this department by a builder or architect we examine it, and if we find that an air-shaft running through each flat is projected we have to be satisfied, but we cannot order that the shaft shall be built of non-combustible material. But these air-shafts are a source of danger not less fatal, though more stealthy, than fire. For instance, we will say that an air-shaft is built in these houses of the usual material, which is simply a hollow square, six feet by six feet, inclosed with cheap lath and bad plaster. This shaft holds all the moisture which the atmosphere contains, and, as a result, the rooms through which it passes are rendered damp and unwholesome. Sickness in these flats is only a question of time. If a law were enacted giving the Board of Health the right to see that the hygienic arrangements of a flat or apartment house were properly constructed, and the building department the right to compel the holders to erect fire-proof buildings, there would be no more disasters like that at the 'Cambridge,' and the mortality in the city would not be so large as it is at present." The building law of 1881, although inadequate, has been of no little service, however, since before that date practically no sanitary requirements whatever could be enforced in flats and tenement-houses. This law does not affect buildings erected previous to its passage, and already, since it went into effect, there have been some fifteen thousand cases of violations of it.

MEDICAL NOTES.

— The following event took place in a small town not twenty miles from Boston, — in fact at North Reading. It is to be hoped that the School Board who gave public circulation to such an expression of their ignorance as to the public welfare may receive the just censure which they deserve: —

A physician from a neighboring town had occasion to visit a child in the town referred to, the child being ill with scarlet fever. As was his duty, in strict accordance with the laws of the Commonwealth, he wrote a simple notice of the case, and sent the same to the selectmen of the town, acting as a board of health. Thereupon appeared in the Annual Report of the school committee of that town, dated February, 1882, the following statement: —

"The school was closed two weeks during the winter term through the wild judgment of an out-of-town doctor. We do not care to speak his name, trusting in the future he will be more careful to know his business before assuming authority."

— The address of the president at the last annual meeting of the Missouri Medical Society on Quacks and Quackery in Missouri contains some interesting revelations. "An old fellow on the State line, who claims to be a root doctor, has but three medicines in his dispensatory. He names them respectively *Hibobalorum*, *Lobobahirum*, and *Hilobustem!* One is a cathartic, another an emetic, and the last a 'rank pizen,' which will burst his patients open. He makes the first by peeling the bark downward, the second by peeling it upward, and the last by peeling it around." These diverse effects are evidently dependent on dynamic changes produced in the drugs by the degree of agitation incidental to each of the several methods of treatment.

— One of the saddest deaths from chloroform of which we have any knowledge is reported from Portsmouth, Virginia. According to a newspaper account of the affair, the wife of a physician was chloroformed by her husband, and fourteen teeth were then extracted by a dentist, but the poor woman never recovered consciousness.

— "Condensed elephant's milk" is the somewhat ambiguous aliment suggested by a contemporary for infant feeding.

— A correspondent of the *Medical Times* (February 24th) relates a case of poisoning by the ingestion of one grain of sulphate of atropine, which was treated by the hypodermic injection of "sixteen to eighteen grains of morphia," under the influence of which the patient recovered. This enormous amount of morphia produced no symptoms of narcotism, and the patient had not been addicted to the use of the drug. It has been generally held that while atropia was a useful antidote for morphia, the converse did not obtain, and that even in the former case it was unsafe to exceed to any considerable degree the physiological dose of the antidote.

NEW YORK.

— The exercises of the forty-second annual commencement of the Medical Department of the University of the City of New York were held at the Academy of Music on the evening of March 13th, when the degree of Doctor of Medicine was conferred on 163 graduates. The valedictorian was Ernest R. Birkins, and the Rev. Dr. John Hall, chancellor of the university, made the address to the graduating class, as well as presented the Mott medals and other prizes The prize of $500, for the highest standing in the class, was taken by Henry P. Loomis, B. A., a son of Prof. Alfred L. Loomis. Gilmore's band furnished the music, and among the selections was the "March of the Class of 1883," composed by the leader in honor of the occasion.

— The Bellevue Hospital Medical College commencement was held at Chickering Hall March 14th. There were 167 graduates, and the valedictorian was E. A. Morgan, of Illinois. Prof. Samuel D. Gross, of Philadelphia, delivered the address to the graduating class, and among the good advice that he gave the young gentlemen was that they should marry early and wear cheerful faces; the only proper place for the lugubrious physician being in a monastery. He incidentally warned them against unseemly quarrels with fellow-members of the profession, and also against asking the age of middle-aged and maiden lady patients. In conclusion, Professor Gross urged upon the class with much earnestness and force a strict observance of the Code of Ethics of the American Medical Association, which, he said, was a true and faithful guide. It was the palladium of their rights, the ark of their safety, and he who dishonored it dishonored his profession. No prizes were awarded, but the names of the four special honor graduates, whose standing in scholarship entitles them to a position on the house staff of Bellevue Hospital, were announced.

— A child seven months old recently died from the absorption of morphia in the following lotion, prescribed by the family physician for a scalded hand: Carbolic acid, one and a half ounces, sulphate of morphia, twenty grains, and linseed oil, four and a half ounces.

— A boy eight years of age died of hydrophobia on the 13th of March, after two days' illness. Nearly three years ago he was bitten on the hand by a spitz dog, and the wound, which was cauterized, quickly healed.

— A concert given recently at Chickering Hall, in aid of the New York Diet Kitchen, added $1737 to the treasury of that excellent institution. For some time past it has maintained diet kitchens in three of the dispensary districts of the city, from which, on the written requisition of the house and visiting physicians of the dispensaries, invalid diet is dispensed daily.

— At the meeting of the Board of Trustees of Columbia College, held March 5th, a special committee, consisting of the Rev. Dr. Morgan Dix, the Rev. Dr. Talbot Chambers, Dr. C. R. Agnew, and Messrs. William C. Schermerhorn and John J. Townsend, to whom was referred a petition presented by the Association for Promoting the Higher Education of Women in New York, requesting that the trustees should extend the advantages of the college to properly qualified women, reported that in their opinion it was inexpedient to attempt to educate the sexes together in Columbia College. The Board of Trustees almost unanimously sustained the verdict of the committee, the only dissenting vote being that of Dr. Barnard,

president of the college. Resolutions were also adopted to the effect that, as to the education of women otherwise than in conjunction with the students of the college, the Board, whatever their opinions might be, were not at present in a condition to provide for it in the college; that the Board deemed it expedient to institute measures for raising the standard of female education by proposing courses of study to be pursued outside of the college, but under the observation of the authorities, and offering suitable academic honors and distinction to any who, on examination, should be found to have pursued such courses of study with success, and that the special committee should be continued with instructions to prepare a plan for carrying the above into effect.

— At a meeting of the Medico-Legal Society held March 7th Dr. O'Sullivan, chairman of a special committee appointed to investigate the sanitary condition of the public schools, stated that the committee was not as yet prepared to make a final and exhaustive report, but that there could be no doubt, from the observations which they had already made, that medical supervision and inspection of the schools ought to be secured as soon as possible. Nearly every one of the school buildings was badly lighted and ventilated, while the primary departments were over-crowded with young children, who required more air and light than those on the floors above. Alluding to the loss of life in the panic at the parochial school in Fourth Street, Dr. O'Sullivan remarked that if the building inspector of the district had attended to his business properly the disaster would never have occurred.

The paper of the evening was then read by William G. Davies, Esq., on the subject of Mysterious Disappearances and Presumption of Death in Insurance Cases. Some years ago, he said, life policies were issued containing a provision that no presumption of death should arise from disappearance until the policy should have been continued in force by the payment of premiums throughout the expectation of life of the person upon whose death the contract matured according to the company's table of mortality, reckoned from the date of the policy. This was probably the fairest rule for all concerned, as it gave the company what it had the right to expect when it issued the policy, and required the beneficiary to pay what he should have expected to pay. In the absence of any such provision the question of death was one of fact, and the rule of presumption appeared to be that if the insured was exposed to any circumstances of special peril such circumstances, conjointly with his absence, would justify the jury in finding the fact of death, but without such circumstances the mere unexplained absence would not sustain such a finding before the end of seven years. After that period the burden of proof shifted, so that it devolved upon the defendant company to prove that the insured was still living. At the conclusion of the paper ex Surrogate Delano C. Calvin read an opinion of his own in connection with the paper of Dr. O. W. Wright, of Detroit, on Experts and Expert Testimony, which was recently read before the Society.

Correspondence.

CONCERNING NEWPORT, R. I., AS A RESORT FOR CONSUMPTIVES.

MR. EDITOR, — My attention has been called by Dr. Brackett to a criticism of my views concerning Newport as a Winter Resort, by Dr. J. Hilgard Tyndale, of New York, in a late (February 22d) number of your journal, the views in question[1] being, mainly: —

(1.) That a local climate where consumption is confessedly rare is presumedly a good one for consumptives to come to.

(2.) That a presumedly good climate (the ocean climate, for instance) becomes provedly such where consumptives, introduced, are found to mend.

(3.) That a climate permitting a comparative out-of-door life during the winter is so far a favorable one for consumptives; and

(4.) That for chronic chest cases, or threatening such, which cannot go South if they would, or which will not go South while they can, it is an advantage to have a place near home, at the North, which is alike easily accessible during winter, and comparatively favorable for them in the main essentials.

Dr. Tyndale's Proposition I., "that the climate and soil (of Newport) do not particularly favor the development of phthisis among its inhabitants," is in accord with my own statements. He admits that "it is shown that Newport has a smaller ratio of mortality from consumption, both as compared to the population and the total mortality from all causes, than any other locality in Rhode Island; and, further, that in this State the ratio of mortality is smaller than anywhere in this country except the Northwestern States." He states, moreover, what I had not ventured to do, that "health reports from Newport show that both as to soil and (natural) drainage the city is as near perfection as any city on the Atlantic." In objecting that "Newport as a city is not the only one of its size on the Atlantic coast with such small percentage of deaths (from phthisis) as mentioned (12.92 per cent. of all causes)," he does not allude to the collateral facts that its mortality in proportion to population is but 1.53 per thousand, and in proportion to the total mortality but 12.23 per cent. In 1878 it was but 9.16, in 1880 but 9.43, in 1881 but 9.17.

Dr. Tyndale's Proposition II., "that the climate and soil (of Newport) are inimical to the arrest or cure of phthisis in any of its forms," is but an assumption of his own, and is based upon the following errors: —

(1.) He assumes that the statistics of Newport are of only comparatively well-to-do people. Upon the contrary, it has recently been ascertained by Mr. Ernest W. Bowditch, of Boston, during his house-to-house sanitary inspection of Newport for the National Board of Health, the results of which will hereafter be published, that almost, if not quite, one half of all the permanent inhabitants of Newport are European, mainly of the laboring class. Of the balance (American), a great many are very poor, — sailors, fishermen, and the like.

(2.) Dr. Tyndale states that no evidence is given of the cure or recovery of phthisical patients. As to

[1] New York Santarian, January 11, January 18, January 25, and February 8, 1883.

this he has evidently overlooked the testimony I presented from Dr. Francis H. Rankin.[1]

(3.) He denies that a given mortality is any criterion of "the whole number of those stricken with consumption, or something akin to it." This, if true, must be said of all other places whatever.

(4.) He implies that immunity among residents (natives?) of Newport does not guarantee immunity among immigrants into Newport. This point is, however, covered by the Newport statistics, for probably not one half of the (already one half) American population of Newport are Newport born. Many of the Newport-born emigrate to better their financial condition. The Boston, New York, and elsewhere born have immigrated here to increase their enjoyment of life, and to better their health and that of their children.

(5.) He considers, as he practically denies the possibility, under other conditions, of phthisical arrest or cure, that comparative equability of climate can only exist "in relative company with dryness." He can hardly, therefore, have had personal knowledge of Newport throughout the year, or, indeed, have been much upon the sea.

(6.) He more than intimates that he is one of the "dry" extremists of the day.

With the purely theoretical assumptions of Dr. Tyndale one need merely compare the statements of experienced and reliable observers like Sir Henry Holland, for instance, who says: "Amidst all the opinions and phrases current on this subject (the influence of the weather in relation to disease), it is singular how little real knowledge has been gained or applied to practice;"[2] or like Parkes, in whose judgment "the best climates for phthisis are those which permit the greatest number of hours to be passed out of the house."[3] Even Denison, of Colorado, a most eloquent advocate of the dry-climate theory, does not hesitate to acknowledge that it cannot be made the universal rule. If combined with a high altitude, as in his own region, "the more acute or severe the nervous symptoms," he says, "the more of an aggravating nature is the effect of elevation."[4] And again: "The more seriously the respiratory organs, etc., are impaired, the less is the elevation that will produce a given disturbance of them. The ultimate prescription, so far as elevation is concerned, should be from one thousand to three thousand feet *lower* than that at which a somewhat prolonged residence would be injurious to a given invalid."[5]

I must add to the above that Dr. Tyndale seems a little careless in his quotation of pneumonia statistics from the Rhode Island Registration Report for 1880. He compares the eleven cases of death from this disease in Newport city with the seven in the (outside) Newport County towns, neglecting to add that the population (15,693) of Newport city is nearly double that (8487) of the County towns. He mentions the total mortality (230) of Newport County for sixteen years. But he forgets to state that this sixteen years' record of Newport County, in the Report from which he quotes, includes the city of Newport, making a total population of 24,180 in the County, and a yearly average therein of but fourteen (14.37) deaths from pneumonia, or one to every 1682 of the living.

As for 1880, Dr. Tyndale should have said, had he given the exact facts in the case, and but made the usual computation, that while the mortality of the whole of Newport County was for that year, from pneumonia, one death to every 1343 persons, and that of the County towns alone was one to every 1212, that of Newport city was only one to every 1426, — a result very different from what he claimed. He made, moreover, a comparison unfavorable to Newport with Bristol County; 230 deaths from pneumonia in Newport County in sixteen years against 171 in Bristol County. While, however, there are 24,180 persons in Newport County there are but 11,394 in Bristol County. The yearly average of deaths from pneumonia in Bristol County during the period in question was somewhat over ten (10.62). The proportion to living population was one in every 1072, while that in Newport County during the same time was, as above stated, but one in every 1682. Again in favor of Newport.

In the succeeding year, 1881, as shown by the Twenty-Ninth Rhode Island Registration Report, issued since the date of Dr. Tyndale's letter, there were ten deaths from pneumonia in Bristol County, or one to every 1139 persons; seventeen in Newport County entire, or one to every 1422; eight in the Newport County towns outside of Newport city, or one to every 1060; and in Newport itself nine, or but one to every 1743.

The following shows the comparative fatality of pneumonia in every portion of the State of Rhode Island for the three years 1879–1881, in relation to all other specified causes: —

	1879	1880	1881
Washington County	6.81	7.40	9.73
Kent County	5.42	5.45	7.35
Providence County Towns	8.36	6.43	5.58
Providence City	7.72	9.36	8.17
Bristol County	4.96	12.45	4.93
Newport County Towns	4.40	6.67	6.84
Newport City	4.60	5.61	3.93

I had myself not entered into the question of pneumonia at all, as it seemed outside the investigation that I had undertaken. Dr. Tyndale appears to have done so for the purpose of drawing a preconceived deduction; another instance of the danger of attempting to make the facts, which were here (unintentionally, I believe) misstated, conform to a theory, and this a theory that proves not tenable in the case of Newport. Briefly stated, Dr. Tyndale's whole argument is the following: Certain climatic conditions favor the development of pneumonia, and pneumonia originates or intensifies phthisis. The climatic conditions referred to "may be" found at Newport. Therefore Newport *must* be "inimical to the arrest or cure of phthisis in any of its forms." Unfortunately for this assumption, both the phthisis and the pneumonia are but rarities at Newport, and the former, imported, does become retrograde. Dr. Tyndale's reasoning would have applied with equal force and with equal fallaciousness to Dr. Bow-

[1] Sanitarian, January 25th, page 51.
Medical Notes and Reflections, third edition, London, 1855, page 149.

[2] A Manual of Hygiene. Prepared expressly for Use in the Medical Service of the Army. London. 1864. Page 448.

[3] Rocky Mountain Health Resorts, etc. Boston. 1880. Page 147.

[4] Ibid, page 152.

ditch's valuable paper in your journal a year or two ago [1] upon the Isles of Shoals as a Summer Resort for Consumptives. In each instance it is the ocean climate that is criticised and condemned.

You will allow me to present, from the recently received Rhode Island Registration Report for 1881, the following statistics in corroboration of those that I had previously adduced: —

I. Proportion of Deaths from Consumption to Population (per thousand) in 1881.

(1.) The whole State of Rhode Island, 2.56.
(2.) The northern portion of Rhode Island.
(a.) Providence County, outside the City of Providence, 2.36.
(b.) Providence City, 3.24.
(3.) The southern portion of Rhode Island.
(a.) Newport County entire, 2.12.
(b.) Newport County, without the City of Newport, 2.35.
(c.) Newport City,[2] 1.18.

The following shows this average for the past twenty-two years (1860–1881): —

(1.) The whole State of Rhode Island, 2.35.
(2.) The northern portion of Rhode Island.
(a.) Providence County, outside the City of Providence, 2.29.
(b.) Providence City, 3.06.
(3.) The southern portion of Rhode Island.
(a.) Newport County entire, 1.85.

A more recent period gives the following: —

(1.) The whole State of Rhode Island, four years, 1878–1881, 2.45.
(2.) The northern portion of Rhode Island.
(a.) Providence County, without the City of Providence, four years, 1878–1881, 2.30.
(b.) Providence City, six years, 1876–1881, 2.97.
(3.) The southern portion of Rhode Island.
(a.) Newport County entire, six years, 1876–1881, 1.73.
(b.) Newport County, without the City of Newport, six years, 1876–1881, 1.44.
(c.) Newport City,[3] seven years, 1875–1881, 1.53.

II. Proportion of Deaths from Consumption to Total Mortality (per cent.) in 1881.

(1.) The whole State of Rhode Island, 14.07.
(2.) The northern portion of Rhode Island.
(a.) Providence County, outside the City of Providence, 13 08.
(b.) Providence City, 16.03.
(3.) The southern portion of Rhode Island.
(a.) Newport County, without the City of Newport, 15.74.
(b.) Newport City,[4] 9.17.

The following is the average for the past few years: —

(1.) The whole State of Rhode Island, four years, 1878–1881, 14.20.
(2.) The northern portion of Rhode Island.
(a.) Providence County, outside the City of Providence, four years, 1878–1881, 13.88.
(b.) Providence City, four years, 1878–1881, 15.33.
(3.) The southern portion of Rhode Island.
(a.) Newport County, without the City of Newport, six years, 1876–1881, 12.46.
(b.) Newport City,[5] seven years, 1875–1881, 12.23.

III. Proportion of Deaths from Consumption to those from all known causes (per cent.) in 1881.

(1.) The whole State of Rhode Island, 15.12.
(2.) The northern portion of Rhode Island.
(a.) Providence County, outside the City of Providence, 15.16.
(b.) Providence City, 16.15.
(3.) The southern portion of Rhode Island.
(a.) Newport County entire, 14.74.
(b.) Newport County, without the City of Newport, 17.09.
(c.) Newport City,[6] 11.87.

The following shows this average for the past twenty-two years, 1860–1881: —

(1.) The whole State of Rhode Island, 16.96.
(2.) The northern portion of Rhode Island.
(a.) Providence County, outside the city of Providence, 18.18.
(b.) Providence City, 16.04.
(3.) The southern portion of Rhode Island.
(a.) Newport County entire, 14.06.

[1] This journal, January 6, 1881, page 1.
[2] From the City Records.
[3] From the City Records.
[4] From the City Records.
[5] From the City Records.
[6] From the City Records.

The average of this ratio for a more recent period, of seven years (1875–1881), will be found of interest: —

(1.) The whole State of Rhode Island, 15.47.
(2) The northern portion of Rhode Island.
(a.) Providence County, outside the City of Providence, 16.47.
(b.) Providence City, 15.42.
(3.) The southern portion of Rhode Island.
(a.) Newport County entire, 13.57.
(b.) Newport County, without the City of Newport, 1876–1881, 13.23.
(c.) Newport City,[7] 12.92.

The Rhode Island State Board of Health present one table that is of especial value for your Massachusetts readers. It is the following: —

COMPARATIVE PROPORTION OF DEATHS FROM CONSUMPTION TO THE LIVING POPULATION, PER THOUSAND, IN MASSACHUSETTS AND RHODE ISLAND.[8]

	1860	1865	1870	1875	1879	1880	1881
Massachusetts	3.70	3.68	3.43	3.47	3.04	3.08	3.15
Rhode Island	2.88	2.96	2.64	2.52	2.33	2.32	2.56

From which it appears that during the twenty-two years' period already considered (1860–1881) the mortality per thousand from consumption has averaged 3.36 in Massachusetts and but 2.60 in Rhode Island, a difference in favor of the latter State of nearly one quarter of the phthisical deaths.

The State Board alludes to the apparently diminishing mortality, of late years, from consumption in Massachusetts. Such as it is, precisely the same relative diminution is noticeable, as demonstrated above, in the State of Rhode Island.

As to the general climate of Newport the island stands in much the same relation in this respect to the remainder of New England as is held towards England by the Isle of Wight. The general climates of the two islands are not materially dissimilar. So long ago as 1835, in some comparisons he was making of particularly favorable local climates, Dunglison, of Philadelphia, gave the following.[9] It is the mean temperature of several years.

	Newport, R. I.	Newport, Isle of Wight.
Winter	33.82°	40.31°
Spring	46.87	49
Summer	68.70	63.09
Autumn	53.83	51.63

Newport has long been utilized by the profession in Philadelphia and New York in the conduct of various forms of struma, and a large proportion of the present all-the-year residents originally came to the island from those cities as seekers for health. Several of the Newport physicians are here, like myself, as chronic invalids, to obtain convalescence from serious or lingering constitutional disease. Eventually practitioners in Boston and other portions of New England will realize that they have a comparatively fair winter climate close at hand.

Yours sincerely,

HORATIO R. STORER.

NEWPORT, R. I., *March* 9, 1883.

[7] From the City Records.
[8] Consumption in Rhode Island. Extract from Twenty-Ninth Rhode Island Registration Report. By C. H. Fisher, M. D., Secretary Rhode Island State Board of Health. (Providence. 1883.) Page 11.
[9] On the Influence of Atmosphere, etc., constituting Elements of Hygiene. Philadelphia. 1835. 8vo.

LETTER FROM ST. AUGUSTINE, FLORIDA.

Mr. Editor, — The first of March, which in New England brings only a mocking promise of a far-distant spring, finds Florida in the full exuberance of spring itself. The air is everywhere pervaded with the fragrance of orange blossoms; strawberries and green peas are in season, and roses bloom in profusion. For a month past the woods have been brilliant with yellow jasmine, which covers the trees with rich masses of golden blossoms and fills the air with perfume. The voice of the mocking bird is already heard, preparing for the grand chorus of song which is soon to burst upon us.

February in Florida is like the New England June. Frost is long past, the deciduous trees are again clothed with foliage, and the temperature is charming, being usually between 60° and 70° F.

Although winter is spoken of in Florida, the term is really a misnomer, for winter here is unknown. In December and January, to be sure, many trees lose their leaves, an occasional light frost occurs, and overcoats are sometimes comfortable; but there is no weather colder than is found in New England in October and May, so that the intervening six months are practically dropped from the Florida calender and autumn merges into spring. Throughout the so-called winter the orange, magnolia, live oak, and many other trees retain their leaves, roses may be gathered every day, and the orange trees are magnificent, their wealth of golden fruit contrasting finely with their dark-green, glossy leaves.

St. Augustine is one of the choicest spots in Florida. It is one of the few places in our country where sea-air and sea-side pleasures can be enjoyed in midwinter. The sea-breezes exert an equalizing influence upon the climate, rendering it warmer in winter and cooler in summer than the interior. The east and southeast winds are soft and balmy, tempered by the Gulf Stream, which here approaches very near to the coast. Sea-bathing can be enjoyed in summer, and sea-water baths, artificially heated, in winter. The accompanying table will give an idea of the temperature during the past year. The figures are taken from the record kept at the United States Barracks, to which access has been kindly permitted me by the post surgeon, Dr. J. H. Patzki. The temperatures are those shown by the self-registering thermometer, and the monthly mean is computed from the means of the daily observations.

1882.	Maximum.	Minimum.	Monthly Mean.
January	81	31	63.80
February	79	38	61.31
March	85	45	65.38
April	88	58	70.84
May	89	64	73.04
June	93	63	79.03
July	94	70	79.02
August	95	69	79.35
September	89	65	76.61
October	84	54	73.31
November	78	36	61.16
December	78	27	55.01
1883.			
January	79	28	58.15
February	81	41	62.51

During the past winter there have been five frosts, occurring on the 30th of November, 1st and 2d of December, and 10th and 12th of January. None of these frosts were sufficiently severe to do any injury to the oranges. The same number of frosts occurred last winter, and yet this winter has been colder than its predecessor, with more rain and more northerly winds, the severity of the season throughout the country being felt to some extent even here.

Prominent among the advantages of St. Augustine as a health resort is its freedom from malaria. That this immunity has any connection with local conditions would probably be denied by some skeptics of the present day; and yet it is a very significant fact that no fresh-water ponds or streams exist in this vicinity. St. Augustine is nearly surrounded with salt water, has a salt marsh on its western side, and another in the very midst of the town, uncovered at low tide, but even in the immediate neighborhood of these marshes no malaria is found. At one period only, so far as I can learn, did malarial fevers exist here. During the war, in strengthening the earth-works around the fort, so much soil was removed from the vicinity as to leave a low place where the rain collected and stagnated between the fort and the city gates. Cases of chills and fever began soon after to appear among the residents of that neighborhood, and continued until the place was drained, about ten years ago, when they wholly disappeared. The disease never spread beyond the immediate vicinity of this marshy spot, on the north side of the town. This information I have derived from Dr. A. Anderson, a native and life-long resident of St. Augustine.

This freedom from malaria, together with the fresh sea breezes, renders St. Augustine attractive as a summer as well as a winter resort, and people flock here in summer from the interior of the State.

The country people, who come to town with their little two-wheeled carts, drawn by a half-starved pony or ox, show unmistakable signs of malarial poisoning. They live among the fresh-water swamps with which this flat country abounds. One of these men, whom I lately examined, had a spleen as large as his liver.

During the past fall St. Augustine was visited with an epidemic of dengue, or breakbone fever. It prevailed during the months of September and October, and nearly everybody was attacked. The proportion of cases has been estimated at about eight tenths of the population. Other places in this section were also visited by the epidemic, Jacksonville being attacked before St. Augustine. The disease is a very painful one, but fortunately never fatal. The epidemic had passed off before my arrival here in December, so that I have seen no cases, but I had an experience of it in the fall of 1864, when surgeon of a blockading vessel at St. Joseph's Bay, on the west coast of Florida. Out of a ship's company of one hundred men eighty were attacked. The symptoms were then the same as those described as occurring here, excepting that the eruption was less marked. This was of an erythematous character, most developed on the palms of the hands and soles of the feet. The onset was sudden, fever high, headache, backache, and pains in the bones excruciating, constipation the rule, and depression of spirits very great. I well remember with what difficulty, while holding on to my aching back, I clambered down to the berth-deck, which was crowded with men lying in their hammocks, groaning with pain and crying with homesickness. At that time I found quinine in full doses exerted a marked influence on the disease,

those patients who took twenty grains a day from the outset recovering within three days, while those who did not were generally sick from five to ten days. This treatment was not then usual, the authorities generally advising only an expectant treatment, but is now adopted with success, I understand, by many physicians in the South.

St. Augustine has no sewers, and although the health of the town has thus far apparently not suffered from this cause, yet they are undoubtedly needed, on account of the large and increasing winter population. One of the hotels has a private drain discharging into the bay, but the others have none. Much pains is taken, however, by the larger hotels to insure the daily removal of house-slops and the contents of privies, and the sandy nature of the soil and rapid drying of the surface tends to prevent putrefaction and to keep the air pure. A Northerner, however, would hardly like to drink the water of the shallow wells, not more than six feet from the surface, and yet the natives drink it with apparent impunity. Rain-water is used by the hotels and the best of the private houses, but as this sometimes becomes scanty in dry seasons artesian wells are being introduced, furnishing a good supply of water from a depth of about one hundred and eighty feet. This water at first smells and tastes strongly of sulphuretted hydrogen, but after a few hours' exposure to the air becomes sweet and tasteless. In boring these wells the formations encountered are: first, 35 feet of sand; second, 10 to 14 feet of coquina; third, 15 feet of sand and sandstone; fourth, 2½ to 15 feet of coral rock; fifth, 80 to 100 feet of marl; sixth, eight to 17 feet of hard rock; seventh, 20 to 35 feet of marl; eighth, a bed of rock of unknown thickness. It is at the surface of the last rock that the water is found. The character of this rock I have as yet been unable to learn, but it is probably a portion of the tertiary limestone or sandstone which forms the backbone of the Florida Peninsula.

The climate of St. Augustine is beneficial especially in bronchial and throat troubles and nervous disorders. The soft, mild air is soothing to inflamed mucous membranes and tranquilizing to tired and irritated nerves. It is also beneficial in the early stages of phthisis, and many consumptives have found here a new lease of life. For asthma it is probably one of the best places in the world.

Here the invalid who at the North would be confined to the house, breathing artificially heated air, and debarred from exercise, can live out-of-doors all winter, excepting a few days when it is more comfortable and safe to remain near a blazing wood fire. The fact that agreeable occupation for mind and body is never wanting in St. Augustine enhances its value as a health resort. The history of this "ancient city" dates back to 1565, its fort is one of the most wonderful and interesting structures in America, the town has a foreign and tropical aspect, with its old coquina houses and narrow streets, the orange groves are always attractive, the drives are pleasant, and the sea-wall, a mile in length, with its smooth granite coping, affords a delightful walk. There are also fishing, shooting, and the finest of sailing, and the North Beach, with its fine surf, is close at hand. Add to these the library, yacht club, and military post, the last possessing a fine band, and it is evident that pleasant occupation is never wanting, and that there is no more attractive winter resort than St. Augustine.

A few days ago I visited Magnolia, one of the most beautiful places on the St. John's River, whose elegant new hotel is perfect in every appointment. This has been for many years the winter residence of Dr. Seth Rogers, of Pomfret, Ct., who has enjoyed a fine practice at Magnolia and Green Cove Springs. Dr. Rogers now wishes to retire from practice, and offers for sale his charming cottage on "St. David's Walk." For a physician of experience, well known at the North, this offers an excellent opportunity for a winter practice.

Yours very truly, J. F. A. ADAMS, M. D.

ST. AUGUSTINE, FLA., *March* 1, 1883.

LETTER FROM FLORIDA.

MAGNOLIA, FLA., *February*, 1883.

MR. EDITOR, — While we sit here in the shade, enjoying the fragrance of the yellow jessamine or picking oranges from the trees, it seems almost impossible to realize that New England is still wrapped in ice and snow, and those people may well be envied who are able, by a journey of three days, to strike February and March from the calendar, and pass at once from January to June.

The glory of Florida is its spring climate, the country itself is less attractive, for as one passes up the St. John's from Jacksonville to Enterprise, a journey of some two hundred miles, one finds only the same low banks, densely wooded to the water's edge, and relieved here and there by hummocks of sandy ground, rising some twenty to thirty feet above the water-level, and often covered with neatly-kept orange groves.

From Jacksonville to Pilatka the river will average some two miles in width, winding in picturesque curves, and occasionally stretching out into broad lakes; but above Pilatka it becomes much narrower, the curves are so sharp that the steamer almost touches bow and stern in coming through them, and on the river there is scarcely room for two boats to pass; the scenery also becomes more tropical, for instead of the thick growth of oak, cypress, maple, and other trees which one finds below, we often see long rows of palms, some sixty feet in height, lining the bank or forming large groves, while here and there a black alligator suns himself on a convenient log, or a beautiful white heron starts from the swampy ground.

If one dislikes the river climate and longs for some salt air, he can leave the steamer at Tocoi, and the railroad will bring him in an hour to the picturesque old city of St. Augustine, which seems more like a piece of mediæval Europe cut out and transplanted here than a real part of our busy America. Here we can see the old Spanish fortress, built after the principles laid down by Vauban; the Catholic church, with its ancient chime of bells, recalls visions of Menendez and his terrible butcheries; while on the narrow streets, with their overhanging balconies, one often meets the officers and soldiers of the garrison, and on pleasant days the military band attracts visitors to the parade.

If one can imagine our east wind tempered by passing over the Gulf stream in the latitude of 30° he can get some idea of the refreshing breeze which invigorates the air and adds to the enjoyment of a climate which equals our finest days of June; the drives about the country are interesting, and, for those who prefer the water, there is abundant opportunity for pleasure-sailing in the protected harbor or along the coast.

In St. Augustine, however, one misses something of the quiet beauty of the St. John's; here at Magnolia we look out from the hotel across two miles of placid water, often without a ripple, and dotted here and there with ducks, for shooting is not allowed near the house. All around us is a grove of live oaks, with their evergreen leaves, and their branches hung with long streamers of gray moss, which seems like crape, and gives a sad look to the trees; then, if we go back half a mile, we come at once into the long stretches of "pine barren," which reach for miles and miles, and over which the breeze comes laden with a fresh, resinous flavor.

To the brain-tired person it is a pleasure to ride on horseback through these woods, their very monotony and the sighing of the wind through the long needles of this Southern pine has a quieting effect, and one can spend the whole day wandering over the bridle-paths which form the only roads, or striking across lots; for, unlike the marshy woods, there is no undergrowth here, except an occasional patch of scrub-palm, and one only needs a compass for a guide-post.

If one prefers the easier traveling by water, the numerous creeks which flow into the St. John's offer a tempting field for exploration, for one can row or paddle for miles up these winding streams, getting at every turn fresh pictures for a sketch, or catching the sportive bass, while on rainy days the fine hotel which Boston capital has this year finished here gives a chance for bowling, billiards, and other in-door amusements.

What is the other side of this picture? The river climate is damp and moist; through the month of January they have abundant rains, until it seems as if not only the land but also the air had become water-logged. There is a feeling of enervation; one day you are walking in such an atmosphere as one finds in winter in a city greenhouse, with the thermometer at 80°; during the next few days the temperature may drop to 32° degrees, so that one may have a touch of spring, summer, and autumn within a week. At St. Augustine the climate is more even, and at Cedar Keys, on the west coast, the weather is tempered by the milder breezes from the Gulf, but dampness and variability prevail.

In short, the impression left on the mind of a casual observer is, that Florida would be a paradise to the nervous and bronchial New Englander, a happy land where he might escape the rigors of his native spring, where his tired brain and congested larynx might find repose, but not the land to which the good physician would send his phthisical friend whose lungs had already become diseased.

T. H.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 10, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	669	229	13.90	23.75	4.48	1.64	.15
Philadelphia	846,984	433	139	17.32	9.93	7.85	2.08	1.16
Brooklyn	566,689	241	86	14.11	28.64	5.40	4.56	—
Chicago	503,304	170	91	21.76	15.88	8.23	2.94	2.95
Boston	362,535	164	46	12.81	16.47	4.88	1.22	—
St. Louis	350,522	147	54	23.12	11.56	8.16	6.12	—
Baltimore	332,190	188	65	24.03	9.04	10.64	1.06	7.98
Cincinnati	255,708	155	67	15.50	23.26	1.29	7.11	—
New Orleans	216,140	145	32	25.52	11.03	1.38	1.38	17.55
District of Columbia	177,638	85	28	8.23	14.11	1.18	3.53	—
Pittsburg (1883)	175,000	66	—	19.70	12.12	1.51	—	.16
Buffalo	155,137	82	22	32.91	7.34	12.19	10 97	.12
Milwaukee	115,578	40	19	32.50	17.50	17.50	—	—
Providence (1883)	116,755	39	9	12.80	7.68	5.12	—	—
New Haven (1883)	73,000	—	—	—	—	—	—	—
Charleston	49,999	29	13	3.45	13.80	—	—	—
Nashville	43,461	23	9	4.35	17.39	—	—	—
Lowell	59,485	23	9	8.70	4.35	—	4.35	—
Worcester	58,295	22	8	24.25	18.18	4.54	4.54	—
Cambridge	52,740	23	9	8.70	8.70	8.70	—	—
Fall River	49,006	23	11	—	4.35	—	—	—
Lawrence	39,178	13	7	—	7.69	—	—	—
Lynn	38,284	16	2	6.25	6.25	—	—	—
Springfield	33,340	11	0	18.18	9.09	—	—	—
Salem	27,598	12	4	8.33	—	—	—	—
New Bedford	26,875	8	4	—	12.50	—	—	—
Somerville	24,985	11	4	9.09	63.63	—	9.09	—
Holyoke	21,851	10	2	10.00	—	10.00	—	—
Chelsea	21,785	10	4	10.00	20.00	10.00	—	—
Taunton	21,213	12	4	8.33	8.33	—	—	—
Gloucester	19,329	4	1	—	—	—	—	—
Haverhill	18,475	4	0	—	—	—	—	—
Newton	16,995	4	0	—	50.00	—	—	—
Brockton	13,608	3	1	33.33	—	33.33	—	—
Newburyport	13,537	8	2	12.50	—	—	—	—
Fitchburg	12,405	2	0	—	—	—	—	—
Malden	12,017	4	2	—	25.00	—	—	—
Twenty-three Massachusetts towns.	—	63	18	12.56	17.28	3.14	1.57	—

Deaths reported 2962 (no report from New Haven): under five years of age 1001: principal infectious diseases (small-pox, measles, diphtheria and croup, diarrhœal diseases, whooping-cough, erysipelas, and fevers) 495, lung diseases 503, consumption 489, diphtheria and croup 165, scarlet fever 78, small-pox 52, typhoid fever 40, diarrhœal diseases 34, whooping-cough 27, erysipelas 22, cerebro-spinal meningitis 20, malarial fever 19, measles 18, puerperal fever 18, typhus fever one. From *typhoid fever*, Philadelphia 14, New York and Pittsburg seven each, Chicago three, Brooklyn two, Boston, St. Louis, Cincinnati, Charleston, Brookline, Hyde Park, and Holliston one each. From *diarrhœal diseases*, New York nine, Buffalo five, Boston four, Baltimore three, St. Louis, Cincinnati, Providence, and Fall River two each, Philadelphia, Brooklyn, New Orleans, Pittsburg, Milwaukee, and Newburyport one each. From *whooping-cough*, New York nine, Philadelphia five, Cincinnati three, Boston, St. Louis, District of Columbia, and Pittsburg two each, Brooklyn and Chicago one each. From *erysipelas*, Philadelphia and Brooklyn four each, New York three, Chicago, Boston, Cincinnati, Milwaukee, Providence, Lynn, and Salem one each. From *cerebro-spinal meningitis*, Baltimore and Worcester three each, Milwaukee and New Orleans two each, New York, Philadelphia, Chicago, St. Louis, Cincinnati, Lowell, Fall River, Springfield, Taunton, and Woburn one each. From *malarial fevers*, New York seven, New Orleans six, St. Louis two, Brooklyn, Chicago, Baltimore, and Cincinnati one each. From *measles*, New York 10, Chicago and Cincinnati two each, Brooklyn, Boston, Pittsburg, and Peabody one each. From *puerperal fever*, Chicago four, St. Louis three, Boston, Buffalo, and Milwaukee two each, New York, Philadelphia, Baltimore, New Orleans, Nashville, and Springfield one each. From *typhus fever*, Philadelphia one.

Thirty-four cases of small-pox were reported from Baltimore, Buffalo five, Pittsburg three, Boston one; diphtheria 24, scarlet fever 23, typhoid fever five, in Boston; scarlet fever 15, and diphtheria nine in Milwaukee.

In 44 cities and towns of Massachusetts, with an estimated population of 1,229,855 (estimated population of the State 1,922,530), the total death-rate for the week was 19.00 against 19.31 and 19.94, for the previous two weeks.

For the week ending February 10th, in 171 German cities and towns, with an estimated population of 8,720,795, the death-rate was 25.6. Deaths reported 4301: under five years of age 1904; consumption 639, lung diseases 516, diphtheria and croup 217, diarrhœal diseases 142, scarlet fever 64, whooping-cough 45, measles and rötheln 43, typhoid fever 39, puerperal fever 21, small-pox (Posen and Heilbronn two each, Elbing one) five. The death-rates ranged from 13 at Erfurt to 38.2 at Posen; Königsberg 30.4; Breslau 29.4; Munchin 28; Dresden 25.2; Berlin 23.2; Leipzig 17.5; Hamburg 27.3; Cologne 23 1; Frankfort 20.3; Strasburg 26.8.

For the week ending February 17th, in 170 German cities and towns, with an estimated population of 8,684,911, the death-rate was 25.9. Deaths reported 4328: under five years of age 1837, consumption 658, lung diseases 595, diphtheria and croup 196, diarrhœal diseases 140, whooping-cough 73, scarlet fever 68, typhoid fever 53, measles and rötheln 28, puerperal fever 23, small-pox (Heilbronn and Metz one each) two. The death-rates ranged from 16 at Metz to 44.5 at Duisburg; Königsberg 30.1; Breslau 31.2; Munich 34; Dresden 23.6; Berlin 24.9; Leipzig 21.4; Hamburg 26.6; Cologne 24 8; Frankfort 18.4; Strasburg 26.8.

In the 28 great towns of England and Wales, with an estimated population of 8,620,975, for the week ending February 24th, the death-rate was 22.7. Deaths reported 3757: acute diseases of the respiratory organs (London) 366, whooping-cough 80, scarlet fever 79, fever 68, measles 44, diphtheria 36, diarrhœa 29, small-pox (London six, Portsmouth, Hull and Newcastle one each) nine. The death-rates ranged from 13.6 at Brighton to 32.3 at Wolverhampton; Bristol 17.9, Portsmouth 19; London 20.5; Birkenhead 21.2; Birmingham 23; Nottingham 25.1; Sheffield 27; Liverpool 28.3; Sunderland 29.7; Bolton 31.9. In Edinburgh 20.1; Glasgow 33.4; Dublin 35.7.

The meteorological record for the week ending March 10th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
March, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 4	30.113	18	32	11	61	73	75	69	W	NW	NW	10	11	16	C	C	C	—	—
Mon., 5	30.387	17	21	9	64	53	67	61	W	NW	W	13	16	5	C	C	C	—	—
Tues., 6	29.829	27	33	8	57	100	88	94	S	SE	W	12	18	7	C	L S	O	—	—
Wed., 7	29.852	23	34	14	88	51	48	62	W	W	W	8	24	16	F	F	C	—	—
Thurs., 8	30.306	18	24	8	27	46	53	42	W	W	W	8	9	11	C	F	F	—	—
Fri., 9	30.218	26	37	11	67	64	73	68	SW	W	S	7	11	5	C	C	C	—	—
Sat., 10	29.406	35	36	20	72	100	80	84	SE	W	SW	10	23	10	O	R	O	—	—
Means, the week.	30.016	23	37	8	62	69	69	66										17.10	1.51

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 9, 1883, TO MARCH 16, 1883.

BROWN, HARVEY E., major and surgeon. Temporarily assigned to duty at Mount Vernon Barracks, Ala., during the absence on leave of Captain T. A. Cuningham. Paragraph 2, S. O. 17, Department of the South, March 6, 1883.

WILLIAMS, J. W., major and surgeon. Upon being relieved from duty at Fort Cœur d'Aléne, Idaho, will proceed to Fort Walla Walla, Wash. Ty., and report for duty as medical officer at that post. Paragraph 5, S. O. 24, Department of the Columbia, March 1, 1883.

CUNINGHAM, T. A., captain and surgeon. Granted leave of absence for twenty days, to take effect from the 21st instant. Paragraph 1, S. O. 17, Department of the South, March 6, 1883.

HEIZMANN, CHARLES L., captain and surgeon. To be relieved from duty in the Department of the South and assigned to duty at Columbus Barracks, Ohio. Paragraph 8, S. O. 58, A. G. O., March 12, 1883.

WOOD, MARSHALL, captain and surgeon. Is assigned to duty at Fort Cœur d'Aléne, Idaho. Paragraph 5, S. O. 24, Department of the Columbia, March 1, 1883.

A CORRECTION.

MR EDITOR, — In the report in Materia Medica of last week is one serious error which I should like to have corrected. Page 250, second column, below the middle, the paragraph beginning "Squibb, who has examined this, says . . . *twenty per cent. pure*," the twenty per cent pure should be omitted. What Dr. Squibb says is, "Duquesnel's aconitine cristallisée is, therefore, not what it purports to be, but is a nitrate of aconitia containing not more than 80.7 per cent. of the hydrated alkaloid."

W. P. BOLLES.

CORRECTION. — In our last issue, report of the Boston Gynæcological Society, the reader of the paper is given as W. S. Thom. It should be W. S. Brown.

Original Articles.

MISLEADING CARDIAC MURMURS AND EXPIRATORY AUSCULTATION OF THE HEART.[1]

BY HAMILTON OSGOOD, M. D.

THE cardiac murmurs to which this paper refers, being caused neither by valvular lesions, pericarditis, pleuritis, anæmia, nor by malposition or deformity of the general contour of the heart, but having, perhaps, led practitioners to suppose the existence of cardiac disease, may appropriately be termed *misleading cardiac murmurs*.

To the possible occurrence of murmurs in persons free from anæmia, and in whom the heart and lungs are normal, my attention was especially called a few years ago by the case of a young man, who applied for life insurance in a company for which at that time I was medical examiner.

While not strictly robust, this gentleman was in excellent health. His age was twenty-three; height five feet seven inches; weight one hundred and twenty-six pounds; chest expansion three inches; pulse 75, firm, full, and steady. The insurance company in question required two pounds in weight for each inch of stature. The applicant, therefore, was eight pounds below the standard, but, at his age, in view of the fact that his lungs were sound and his health good, this slight discrepancy was of no consequence. The formal examination discovered that he never had experienced any of the diseases concerning which he was questioned. Indeed, every step gave me satisfaction until I auscultated the heart, which organ it is my custom to examine last of all, in order that it may be as free as possible from the agitation which commonly attends this feature of life insurance. To my dismay I heard a murmur, distinct, systolic in point of time, its quality soft, yet suggesting friction, and located in the pulmonary area, with but little propagation. The area of percussion dullness was normal. The discovery of a cardiac murmur so very naturally leads the physician to infer endocardial disease, that I at once felt it my duty to reject the applicant. The more so because the young man's condition precluded all idea of an anæmic murmur. But financially at least, the risk was very desirable. Moreover, up to this juncture neither my questions nor examination had given me the slightest reason to suspect the heart. The most careful cross-examination failed to elicit any history of rheumatism, dyspnœa, difficulty of moving quickly, or to reveal even a hint of palpitation, or cardiac distress of any nature or degree. So far as I could learn, the applicant had always been in that enviable condition in which one is unconscious either of heart or lungs. Of active temperament, he could dance all night, ride horseback, play cricket, and outrun his fellows with ease and delight.

The inconsistency so apparent in this case, namely, a cardiac murmur coexisting not only with perfect freedom from dyspnœa of any degree, as well as from imperfect circulation, but also with absolute enjoyment of severe and prolonged muscular exertion, struck me as singular. I repeated my examination of the heart, in this instance being extremely observant of every sign, whether normal or abnormal. The first and second sounds were perfectly clear, clean, and distinct, still the first was closely accompanied by the basic murmur. When the lungs were fixed at the end of inspiration the murmur continued. During expiration, however, I remarked that it became less distinct. A sudden inspiration led me to place the gentleman so that his back rested firmly against a door opening into a small, bare-walled, carpetless room. It made an excellent resonator. I now requested him not only to exhaust but as far as possible to *collapse* his lungs and rigidly hold them thus. He did so, and to my surprise the murmur disappeared. Nothing but the distinct, well-marked, normal cardiac sounds could be heard. It was impossible to catch the slightest sign of a murmur. On full inspiration it reappeared. Repeating these procedures many times the results were invariable. The heart undoubtedly was normal and I passed the applicant, giving the abnormal sound merely the character of an attrition murmur, adventitiously caused by certain relations of the left lung to the heart. I felt justified in so doing simply because when the lungs were inflated I heard the murmur, when they were in partial expiration it became fainter, and when they were collapsed with force and the breath held, the sound disappeared. Fancying the question may arise as to whether this murmur would not have equally disappeared while the lungs were fixed during a full inspiration, I will say that I did not neglect this point. I found it mattered not whether the lungs during inspiration were or were not moveless, the murmur continued. Moreover, I was influenced by the positive assurance of the gentleman to the effect that he had never had pleuritis nor pericarditis. Indeed, had never known a day's illness.

In some of its features the case was new to me, and I could not find in any work on cardiac disease to which I have had access an instance wholly similar to this. References, which I will shortly give, are made to murmurs occurring in cases in which there was no disease of the heart. But, with one or two exceptions, I have found no especial allusion to changes caused by inspiration and expiration, except in so far as these respiratory movements may affect the intensity of cardiac tones and murmurs.

The case I have described is a type of other similar cases which have come under my notice; and these, therefore, do not require further mention.

The striking and complete disappearance of the murmur during expiration and its equally abrupt reappearance on inspiration in these cases, together with the procedures which I employed in studying its character, suggested to me a method of diagnosticating or proving the existence as well as absence of endocardial murmurs, namely, *auscultation of the heart during collapse of the lungs*. A merely ordinary expiration would not be sufficient, because there still would probably be considerable lung tissue between the thorax and the heart. The expiration must be forced and then be followed by supplementary expirations until the patient can expel no more air from the lungs, which for the moment must then be kept immovable. In theory I believe we then have an uncovered heart; that the valvular orifices lie close to the ear, and that by this means auscultation in every way is much aided. In fact I have found that while the murmur which I have been describing becomes gradually fainter and less audible during slow expiration, and wholly disappears on forced expiration, on the other hand, I have observed that true endocardial murmurs grow increasingly louder during expira-

[1] Read before the Boston Society for Medical Improvement, March 12, 1883.

tion, and become most distinct at the end of the expiratory act, especially when the lungs are held in a state of voluntary collapse. The process may be repeated for each one of the valvular orifices. The use of what I will venture to term *expiratory auscultation of the heart* has given me great satisfaction, for, where there is nothing wrong, the normal cardiac sounds, under this mode of auscultation, become sharper and more distinct, and conversely, where there is valvular imperfection, the endocardial murmurs are rendered much more evident. Indeed, the assistance I have derived from *expiratory auscultation* of the heart has been so great that I should consider imperfect an examination of this organ which did not include this procedure. Of course the neglect to compare all cardiac sounds heard during this expiratory collapse with sounds apparent during forced inspiration would be an error; but the truer proof, the more satisfactory certainty of the actual meaning of valvular murmurs, friction, and adventitious sounds, may be obtained during forced and sustained collapse of the lungs. It may be that this method of examination has been recommended by some writer on cardiac disease whose work I have not seen. As has been shown, some writers refer to the effect of respiration upon the quality and intensity of murmurs, but with one suggestive exception, I can find no allusion to the value of *expiratory* auscultation in proving the existence and in studying the character of true endocardial murmurs.

It is naturally a matter of interest to know what writers on cardiac diseases have said with reference to the manner and degree in which inspiration and expiration may influence cardiac sounds and murmurs. Von Dusch [1] says: "The intensity of murmurs changes with the respiratory movements according as inspiration has the power to weaken and expiration, on the contrary, to strengthen the action of the heart." Traube remarks: "Cardiac friction sounds increase in intensity during inspiration; endocardial sounds thereby become weakened."

Guttman,[2] Friedreich,[3] Skoda,[4] Gerhardt,[5] and others make the observation that the heart's tones are stronger during expiration than during inspiration, because, in the latter act, the thicker layer of lung tissue which lies between the heart and the thorax diminishes intensity. Friedreich adds that "in case of mitral murmurs greatest intensity will, during quiet respiration, be best heard in the fifth interspace, and during complete expiration will move upward to the fourth interspace."

Balfour [6] remarks that systolic murmurs of non-organic origin may *disappear* on deep inspiration, and quotes Quincke's [7] six cases in proof, meanwhile accepting his theoretical explanation of their cause, to the effect that in these cases the heart from various causes being uncovered by retraction of the left lung, a systolic murmur was produced by compression of the pulmonary artery against the chest walls during systole. The murmur disappeared on deep inspiration from interposition of the lung between the pulmonary artery and the thorax. Upon expiration the murmur reappeared.

1 Lehrbuch der Herzkrankheiten, s. 63.
2 Untersuchungs Methoden, s. 249.
3 Virchow's Pathologie u. Therapie, B. v. 2te Abtheilung, s. 230.
4 Perkussion u. Auscultation.
5 Lehrbuch der Auscultation u. Percussion.
6 Diseases of the Heart.
7 Berliner klinische Wochenschrift, 1870, No. 21, s. 249.

Flint [8] quotes a case in which the murmur was accidental, but did not disappear when the breath was held, and there was coexistence of pleuritis.

Gerhardt [9] asserts that "the respiratory murmurs heard in the cardiac region are accidental, and while the breath is held after deep inspiration or deep expiration essentially change their character or disappear." In the cases which I quote, however, the murmurs accompanied the cardiac systole, and were not respiratory, because their frequency coincided with the repetitions of the cardiac systole.

In his work on the heart, Hayden says that pericardial friction sounds most frequently exhibit an inspiratory rhythm or periodic intensification corresponding to the inspiratory act.

Bauer [10] refers to the peculiar alteration of pericardial friction sounds by the respiratory movements, especially to the increase of the sound during inspiration. In reference to their confusion with endocardial murmurs and pleural friction sounds he quotes Ferber,[11] who locates the so-called pleuro-pericardial friction sound near the apex of the heart, in the vicinity of the tongue-shaped lobe of the left lung, and describes the modifications it undergoes during the various acts of respiration. Da Costa,[12] under the subject of Pericarditis, says: "A friction sound discerned over the heart may in reality be produced in the adjoining pleura. The patient is directed to suspend his breathing. The friction sound does not stop. Now the inference from this would be that the sound originated in the pericardium, and in the majority of cases this is a correct inference. But it is not always so. The friction sound may be engendered in the pleura, and be caused by the movements of the heart." He also alludes to the fact that a murmur may be obscured by the respiratory sound, and says that natural sounds of the lungs are sometimes mistaken for blowing sounds in the heart.

Irrespective of the effect of respiration upon cardiac tones and murmurs, and touching which so little is to be found, there are in the books many theories concerning the cause of sounds which simulate valvular murmurs and suggest endocardial disease. For example, Laennec [13] mentions cases of cardiac hypertrophy in which the lung is so compressed by the overgrown heart in systole that air is driven into the contiguous and connecting bronchial tubes, thus creating a murmur similar to that heard in valvular disease. Wintrich heard near the heart during systole a soft, breezy murmur simulating the inspiratory sound, and which he supposed to be an aspiration of air created by the systolic diminution of the size of the heart. Röser speaks of sounds (in the borders of lungs which were tubercular or contained cavities) heard synchronously with the cardiac systole.

Loomis [14] writes: "Sounds sometimes are heard in the precordial region produced by the action of the heart on the lungs. These sounds are mostly systolic and inspiratory; they usually cease to be produced when the respiratory movements are arrested. . . . A blowing sound resembling a cardiac murmur may be produced in the lung tissue covering the heart during a cardiac systole." In my cases suspended breathing

8 Diseases of the Heart, 2d ed., pages 371, 372.
9 Loc. cit., s. 203.
10 Ziemssen's Cyclop., vol. vi., p. 594.
11 Loc. cit., page 596.
12 Physical Diagnosis.
13 Traité de l'Auscultation, 2d ed., vol. iii., p. 20.
14 Physical Diagnosis, page 111.

did not arrest the murmur. He further says: "A pulmonary cavity near enough to the heart to be influenced by it sometimes affords a loud systolic murmur."

Walshe states that he has known mere vascularity of a very small surface, without a particle of lymph, to produce a faint rubbing sound. "This," he says, "is, however, sometimes observed when the membrane may be presumed to be entirely healthy."

Flint[1] remarks: "I have occasionally discovered in auscultating the heart a slight rubbing or grazing sound accompanying the systole when there were no grounds for suspecting any cardiac disease." Gerhardt[2] says: "There are occasionally accidental murmurs, mostly systolic, though now and then diastolic, which are confined to a very limited area and *do not* accompany the tone. These accidental friction murmurs I believe, and have proved it by many autopsies, must be considered the result of pericardial friction." This is the opinion which I formed as to the origin of the murmurs in my cases, and for reasons concerning which I have a theory which I will shortly give.

Quincke,[3] quoted by Balfour,[4] says that in rare cases of mitral stenosis accompanied by hypertrophy, but not dilatation of the right ventricle, but with dilated pulmonary artery, the fluid vein caused by the passage of the blood through the comparatively small opening into the dilated artery will cause a (basic) murmur. I should mention the very interesting phenomenon mentioned by Bamberger, Von Dusch, and others, and rightly explained by Naunyn,[5] of a basic systolic murmur, presumably a pulmonic arterial bruit, but proving to be a fluid vein of mitral regurgitation producing a louder sound at point of impingement in the left auricle than in the mitral area, and heard, therefore, with greatest intensity over the left auricle, and consequently to the left of the pulmonary area. Other writers, Graves, Latham, Gerhard, of Philadelphia, Hope, Trousseau, Von Dusch, Oppolzer, Niemeyer, etc., in their various works, refer to murmurs apparently cardiac in origin, but heard during the coexistence of some affection of the lungs, especially of tubercular nature. Friedreich,[6] however, says: "All these murmurs, when caused by movements of the heart against the lungs, whether the latter be normal or diseased, disappear so soon as one auscultates during deep inspiration." It will be recalled that in my cases inspiration intensified the murmurs. To multiply quotations is needless, especially so in view of the fact that some abnormal condition accompanied nearly every case which I have cited. In my own cases the heart, lungs, and their envelopes were normal.

I have quoted all these luxuries among cardiac murmurs, as a matter of interest, to show what might have caused the murmurs in my cases, supposing I erred in my diagnosis, which I hope to prove was correct. But, first, may I ask you to observe that save the necessary reminder of the usefulness of the respiratory movements in the diagnosis of pericarditis and pleuritis, little is said by writers on cardiac disease in reference to the value and effect of *forced expiration*. That is to say, the books either make no allusion to the matter, or, when they do mention it, dismiss the subject in a few words. Hope[7] says: "The heart comes into more than ordinarily extensive contact with the chest during expiration. Under this condition impulse is stronger and the first sound louder. The auscultator will know how to avail himself of this fact in the exploration of disease, and make due allowance in his estimate of sounds and impulse." With this imperfect exception, and unless I have been unsuccessful in my search, no writer whom I have consulted on this point *emphasizes* either the necessity or usefulness of auscultating the heart during forced, complete, and fixed expiration. It is during *collapse of the lungs*, the breath *being suspended*, that faint endocardial murmurs, not otherwise audible, would be likely to become evident. It is then, too, that certain adventitious murmurs, heard when the lungs are inflated, disappear. *Expiratory auscultation*, therefore, is an aid too valuable to be omitted, even in a superficial examination of the heart. But in using this method of examination it should be remembered that the lungs must be forced into temporary collapse and the breathing then be arrested.

These remarks would be incomplete were I to omit the expression of an opinion as to the probable nature and cause of the systolic murmurs referred to.

At the outset all pathological causes may, I believe, be excluded. The murmurs were not *hæmic*. This is assured by the condition and history of my patients. They were not due to *pericarditis*. This is shown by their purely systolic occurrence, by absence of all other indications of this disease, and especially by their disappearance on expiration. They were not *pleuritic*, otherwise they would have been either synchronous with the respiratory movements or affected by them, and presumably would have been arrested on suspension of breathing, the fact being that they were intensified by inspiration, whether the respiration were or were not arrested. They were not the *pleuro-pericardial friction sounds* described by Ferber, because they were basic, and not heard near the apex of the heart, as his murmurs mostly were; and, moreover, there was no friction sound synchronous with respiration. The history of my cases excludes tubercular roughening of the edges of the lungs, and in this contingency there probably would also have been friction sounds accompanying the movements of the lungs.

They were not due to *emphysema* in the left lung, else they probably would not have disappeared on forced expiration, which, this lesion having existed, would have failed to remove the lung from the anterior surface of the heart. Moreover, the lungs of my cases were normal in condition. *Deformity* did not cause these murmurs, for it did not exist. They were not blowing sounds caused by systolic impulse of normal heart against normal lungs, because they contained no respiratory element.

They undoubtedly were not the *systolic aspiratory murmurs* of Wintrich, because they continued almost to the end of the expiratory act, at which period it would seem impossible for the cardiac systole thus to influence the air of the lungs.

They were not due to *compression of the pulmonary artery*, as described by Quincke, because inspiration intensified them. His were heard during expiration, and, for reasons already given, disappeared on inspiration.

They were not the *mitral regurgitant murmurs* of Naunyn, and heard in the pulmonary area, because they di appeared on expiration. The Naunyn mur-

[1] Diseases of the Heart, 2d ed., page 364.
[2] Loc. cit.
[3] Loc. cit.
[4] Loc. cit.
[5] Balfour, loc. cit., page 160, and Berliner klinische Wochensch., 1868, No. 17, s. 269.
[6] Loc. cit.
[7] Diseases of the Heart, 3d ed., page 5.

murs, being endocardial, naturally were made more evident by uncovering the heart in forced expiration. For the same reason the murmurs in my cases were not endocardial. What, then, was their cause?

In the absence of positive information my own theory is that these murmurs were due to some slight, probably congenital, irregularity of surface in the pericardium near the base of the heart. During the act of inspiration, pulmonary pressure increased the friction created in systole and intensified the murmur. During expiration, the pulmonary pressure being gradually removed, the murmur likewise became less and less apparent. Finally, on collapse of the lungs with arrested respiration, all pressure upon the wrinkled or irregular surface, or surfaces, of the pericardium was removed, and therefore the murmur ceased. It was purely systolic, probably because the irregular pericardial spot being confined to a limited area near the base of the heart a suspension of friction occurred during diastole, when the heart is relaxed, is less convex than in systole, and has no impulse. The sound recurred during systole, in which the base of the heart is thickened, and the whole organ thrown forward by the impulse of a recoil which is accompanied by cardiac rotation. Even in pericarditis, a large surface being roughened by lymph, the diastolic portion of the common to-and-fro friction sound is usually relatively feeble. If this roughening were confined to a very small area near the base of the heart there presumably would be heard little or no diastolic friction sound. My diagnosis, then, is *systolic* and *accidental pericardial friction sounds.*

CONSUMPTION IN NEW ENGLAND.

BY E. P. HURD, M. D.,
Chairman Board of Health, Newburyport, Mass.

I.

IN studying the march of consumption in New England, we select the city of Newburyport, Mass., as the type of an old-fashioned New England city, with a population that has been nearly stationary the past forty years. If there has been any change in the population it has been in the direction of an increase of the foreign element, coincident with the development of manufacturing interests the past two or three decades. A considerable part of the native population occupy homes that have been a family inheritance for several generations. An old sea-port and fishing town, many of the leading inhabitants with pride trace back their ancestry to the original settlers of this country. Add to this that the city has salubrious surroundings, and is remarkably free from malarious and zymotic diseases, yet from its situation, on a declivity near the ocean, is exposed to chilly winds and inclement weather, and thus presents, as much as any city in the Commonwealth, the suitable climatic conditions for the development of consumption.

I have, at the cost of a great deal of time and labor, compiled statistics of the mortality from pulmonary phthisis in this city for the past twenty-five years. These statistics will be published in full in the next report of the Newburyport Board of Health. I have thought that the results might interest the readers of the Boston Medical and Surgical Journal. The preparation of statistics always involves the expenditure of much toil and research, and few readers are interested in the presentation of a formidable array of figures; all, however, are anxious to obtain the results. It is understood by all who have ever made such statistics that only approximate accuracy can be obtained, for death returns (often made hap-hazard) are notoriously unreliable; it is, however, true, that such as record consumption are likely to be the most reliable of any. Add, moreover, that no very startling conclusions can be expected from statistics embodying the data of only a brief series of years, while hints may certainly be obtained as to the tendencies of great natural laws which slowly but surely work out their results.

First, then, my statistics show a total mortality from all causes, for twenty-five years, of 7234; the average population being 13,500. Of these deaths 1235, or very nearly one sixth, were from consumption. Consumption, then, is still the most potent cause of mortality here, as elsewhere.

There is general harmony between these statistics and those published by Dr. J. Curtis in the *American Journal of Medical Sciences* more than forty years ago. From Dr. Curtis's table it appears that the deaths from phthisis in Boston during the twenty-eight years, from 1821 to 1848 inclusive, were 1 in 5.76 of all deaths, or 17.36 per cent. Dr. Hayward, from an examination of the statistics of New York for thirty years prior to 1850, gives the proportion in that city at 1 in 5.54, or about 18 per cent.

Dr. E. M. Snow, of Providence, R. I., in his valuable Notes on the Causes of Death in City Registrar's Report, 1881, gives an average percentage for twenty-six years, 1856–1881 inclusive, of 16.69 per cent. According to my figures, for the twenty-five years ending December 31, 1882, the average death-rate from consumption has been 1 in 285 of the whole population, or 3.77 in each thousand persons. Dr. Snow gives the average death-rate in Providence for the twenty-seven years, 1855–1881 inclusive, as 1 in 317, a considerable decrease over the average annual rate for the fifteen years, 1840–1854 inclusive, which was 1 in every 209 inhabitants.

The following table (pertaining to the city of Newburyport) shows the ratio of mortality from consumption among the native population for five periods during the past twenty-five years. The ratio of mortality among the foreign population is also shown; by comparing the latter statistics with the former, it will be seen that the death-rate from consumption among persons of foreign parentage is far in excess of that of the native population. The foreign population of Newburyport is estimated at 3000; it is, however, prepremised that the foreign element of any community is very variable and fluctuating, especially in manufacturing towns, where seasons of great business activity alternate with seasons of great depression. There have been years when the mortality from phthisis among foreigners has been very great, as in 1879; years when there has been an unusual influx of foreigners, chiefly Irish and French Canadians, who, bringing to this country constitutions enfeebled by hardship and privation, fell easy victims to the rigor of our climate. It is not an uncommon experience for physicians to record two and even three deaths from consumption in the same family and in the same season, nor is it unusual for parents coming originally from Ireland, and free from all hereditary tendencies to consumption, to witness their sons and daughters succumb, one after another, to the same disease.

POPULATION OF AMERICAN PARENTAGE.

1858..... one death from consumption in 370.
1865..... one death from consumption in 564.
1870..... one death from consumption in 252.
1875..... one death from consumption in 300.
1880..... one death from consumption in 351.

POPULATION OF FOREIGN PARENTAGE.

1858..... one death from consumption in 273.
1865..... one death from consumption in 150.
1870..... one death from consumption in 161.
1875..... one death from consumption in 176.
1880..... one death from consumption in 136.

Yearly average among persons of American parentage, one death from consumption in 336. Yearly average among persons of foreign parentage, one death from consumption in 179.

The lesson taught by these tables is that consumption is far more prevalent among foreiguers than among natives; as far as the latter are concerned there is a gradual decrease in the death-rate from this disease. This truth is still more apparent from Dr. Snow's carefully prepared statistics for a similar term of years; any difference in details being (possibly) explicable in part by the fact that the climate of Newburyport and of sea-port towns generally in this State is somewhat more severe and changeable than the climate of Providence, and as a consequence is more trying to foreigners.

POPULATION OF AMERICAN PARENTAGE (PROVIDENCE, R. I.).

1856..... one death from consumption in 268.
1865..... one death from consumption in 310.
1875..... one death from consumption in 415.
1880 ..... one death from consumption in 435.

POPULATION OF FOREIGN PARENTAGE.

1856..... one death from consumption in 262.
1865..... one death from consumption in 248.
1875..... one death from consumption in 288.
1880..... one death from consumption in 268.

The words "native population" in the above tables refer to decedents of American parentage, not always, however, acclimated to the locality where they died. In fact, reference to the mortality records shows that many of these decedents were comparatively strangers to the locality, immigrating from homes more or less distant. Persons, for instance, coming from inland regions often find our east winds and fierce northwesters very trying; any latent predispositions to phthisis are very likely to be awakened, especially if there be much exposure to our chilling spring weather.

The relative infrequency of consumption among the descendants of families that have for many generations been fixed to the soil is a conspicuous fact. Such families, for instance, largely of Puritan stock, as the Littles, the Lunts, the Spaldings, the Withingtons, the Moodys, the Pikes, the Lowells, the Woods, the Simpsons, the Stones, the Pettingills. I have inquired concerning the mortality records of all these families, and many more, indigenous (if I may so speak) to this region, and find consumption almost unknown for many generations.

In the struggle for existence the strongest and fittest survive. Nature by a process of selection gradually weeds out the sickly and infirm, — those not adapted to their conditions, — letting only those live who by inherent vitality can successfully cope with the difficulties of their environment. This truth is exemplified in the history of consumption in New England. The native race is becoming more hardy (at least in respect to resistance of severities of climate), while immigration is furnishing, and will long continue to furnish, the customary quota of deaths from consumption.

In another number I purpose to discuss the subject of causes.

RECENT PROGRESS IN THEORY AND PRACTICE OF MEDICINE.[1]

BY GEORGE B. SHATTUCK, M. D.

THE HYGIENIC TREATMENT OF ALBUMINURIA.

SENATOR delivered lately a lecture on this subject before the Berlin Medical Society,[2] which derives its value less from any novelty of the remarks than from the authority of the speaker in regard to renal disorders. Senator's conclusions are confirmatory of the best American and English writers' recommendations as to the treatment of albuminuria. After reminding the reader that the albuminuria is a symptom and measure of a disease, not a disease itself, that the amount of albumen lost — two and a half drachms daily being a very large amount — is not serious, though the local effect of its passage through the renal tissues is very possibly injurious, and alluding to the generally recognized inadequacy of drugs in chronic albuminuria, Senator takes up the various points of hygienic treatment which offer hope at least of alleviation and prolonged comparative health, and among such emphasizes especially the following: (1.) The question of the nourishment of patients with nephritis should include a consideration of the influence exercised upon the albuminuria both by the condition of the digestive process itself and by the character of the nourishment. (2.) The rule may be accepted in general that with albuminuria the wants of the system should be supplied rather by frequent small quantities of food than by larger amounts at longer intervals. (3.) Eggs should be forbidden; meat and cheese used sparingly, and of meats preferably veal or poultry; fish is to be recommended; fruit and vegetables are indicated, but the leguminous varieties less so; the use of fat is to be governed by the state of the digestion; spiced, smoked, and salted viands are unsuitable; red wine may be used moderately; beer, spirits, and the heavier wines are to be avoided; a milk diet is extremely useful, but that it may be sufficiently prolonged bread or some similar addition should be made. (4.) Saline or alkaline, — saline waters, warm or cold, according to the case, are found practically to act favorably, and this probably by effect upon the digestion and composition of the blood, as theoretically they should be a renal irritant; saline baths are useful through their congestive and stimulating effect upon the skin. (5.) Muscular exertion should be very restricted. (6.) An even body temperature should be sought by clothing, by climate, by retirement to bed if necessary. For clothing flannel should be worn next the skin; for a climate a warm and dry one should be selected, free from sudden changes, with a mean temperature from 60° F. to 70° F. (7.) Psychical influences are of great importance in this condition. (8.) With women during menstruation the amount of albumen excreted is always increased, and they should during that period be confined strictly to bed.

[1] Concluded from page 248.
[2] Berlin. klin. Wochschr., No. 49, 1882.

RENAL INADEQUACY.

Dr. Andrew Clark, president of the London Clinical Society, and the medical adviser of Mr. Gladstone, delivered a very readable address[1] on the above subject a few weeks since, before a meeting of medical men, which contains some valuable hints even for physicians not practicing in the land *par excellence* of beef, beer, and port wine. Under the head of Renal Inadequacy Dr. Clark places a class of cases, which in some measure he ventures to separate entirely from Bright's disease, in which the kidney, without any sensible alteration of structure that modern means of investigation will enable us to determine, cannot produce a healthy urine. Such kidneys produce a urine which, assuming the quantity to be a quantity of health, is low in density, and is deficient in solid constituents, principally the constituent of urea and its congeners. This condition may be regarded as a very early stage of Bright's disease, but the writer thinks it of practical value to recognize by a distinct name a state which may remain as it is during the whole period of life, which is nevertheless capable of removal, and which if unnoticed may lead to serious injury to the patient.

Such patients are characterized by three things particularly: (1.) By a curious inability to properly repair damages done to them either by accident or by disease. (2.) They not only repair damages slowly, but are peculiarly vulnerable; they catch cold, for example, easily, and get rid of it with difficulty. (3.) One can never be sure of the result of the performance of an ordinary surgical operation upon them; they die from a simple operation by hæmorrhage, or [illegible] an ordinary abscess opened and become pyæmic.

Dr. Clark confesses that he knows of no symptoms in the early stage whereby these cases can with certainty be detected, but says in general, "When you get hold of a patient who is ill, suffering from dyspepsia or nervousness, having headaches, and complaining of malaise and weakness, who cannot sleep well, who cannot do his work very well, examine his urine, and if you find that the urine is low in density you had better proceed a little further, and be very precise, and get the urine of twenty-four hours, and if you find that it is under fifty ounces in quantity, that it has not a specific gravity of 1010, and that the urea in it is deficient in amount, — under two per cent., — then whether there be albumen in the urine or not, whether there be any casts or not, whether there be granular débris deposited or not, you may know with certainty that the kidney is not doing its duty."

It may not be that this defect is the cause of the patient's ill health, but if it is found in addition that an increase of food makes the patient worse, and that, within certain limits, a diminution of food makes him better, there need be little doubt of it. As these cases of renal inadequacy progress if they be not well managed, that is, if the management be not adjusted to the fact that they are chimneys being choked, and that a roaring fire cannot be kept on, they develop exceedingly characteristic symptoms, symptoms so like those observed in myxœdema that they can scarcely be distinguished. Dr. Clark cites two autopsies on patients who presented the symptoms of renal inadequacy, one in the earlier, one in the later, stages, in which none of the gross appearances of renal disease were present.

[1] British Medical Journal, February 24, 1883, page 346.

In the way of prognosis it may be said in regard to these cases that if care be taken, if compensation be made for the defective kidney, they probably may go on indefinitely, that is, they may reach the full term of life allotted to man.

Treatment should consist in close attention to simple physiological laws and careful adherence to such rules in regard to diet, clothing, temperature, and exercise as are generally laid down for chronic albuminuria.

PAROXYSMAL HÆMOGLOBINURIA.

Dr. Saundby[2] sums up a paper on this subject as follows: —

(1.) Paroxysmal hæmoglobinuria occurs at all ages, but most commonly in young persons.

(2.) It affects both sexes, but males more frequently than females.

(3.) It is in some cases distinctly hereditary.

(4.) The exciting cause of an attack is almost invariably a chill, though in a few cases the first attack has undoubtedly been induced by a blow, yet the subsequent attacks have been brought on by exposure to cold.

(5.) Its relation to ague is exceptional, and not well made out.

(6.) It is not specially associated with any known diathetic tendency (for example, rheumatism, gout, scrofula), or with any specific disease (for example, syphilis).

(7.) There is strong reason to believe that functional disturbance of the liver is present in many cases.

(8.) Enlargement of the spleen has been noted, but is exceptional.

(9.) During attacks the temperature may vary from normal, or even subnormal, to a high degree of fever (105° F.).

(10.) The skin may be covered by profuse perspiration, or this may be restricted to certain parts, or it may be dry.

(11.) The skin may be jaundiced or of a peculiar dusky hue during and after the attacks.

(12.) The serum of the blood during the attacks has been shown to contain hæmoglobin (Hayem).

(13.) The microscopical characters of the blood are those of slight anæmia.

(14.) The urine during the attacks always contains hæmoglobin or met-hæmoglobin, serum, albumen, paraglobulin, granular and hyaline casts, and urates.

(15.) The urine between the attacks may contain traces of albumen or hæmoglobin, or both.

(16.) The prognosis as to recovery from each attack is good, no fatal case having occurred.

(17.) While a spontaneous cure has been recorded, as a rule the liability to relapses persists.

(18.) No drug influences the liability to relapse, but during the paroxysms quinine has seemed of most service.

(19.) Residence in a tropical climate affords the best prospect of warding off future attacks.

Dr. Isidor Boas summarizes the results of his study of paroxysmal hæmoglobinuria as set forth in his inaugural dissertation at Halle[3] as follows: (1.) Paroxysmal hæmoglobinuria is a disease *sui generis*, and to be distinctly separated from all other kinds of hæmo-

[2] Medical Times and Gazette, March 4, 1882.

[3] Deutsches Archiv für klinische Medicin, vol. xxxi., Nos. 3 and 4, p. 355, 1882.

globinuria. (2.) There is an ætiological moment for the separate attacks of paroxysmal hæmoglobinuria which need never be overlooked, — a chill of individual portions of the skin, especially of those most exposed, as of the hands, feet, nose, or ears. (3.) The separate paroxysms are proportional to the intensity of the general symptoms, and the coloring of the urine to the intensity and duration of the chill. (4.) The natural and artificially produced paroxysms are in respect to symptoms entirely alike. (5.) The disorganization of the red blood corpuscles and the discharge of the hæmoglobin in the plasma precede and the general symptoms follow. (6.) The cause of the tendency to change of equilibrium depends probably upon a diminished power of resistance of the red blood corpuscles in presence of an externally acting irritation. (7.) The dissolution of the red blood corpuscles takes place locally only at the points exposed to cold, and from there the débris reach the blood stream. (8.) The cause of this diminished power of resistance of the red blood corpuscles is in most cases obscure, in a few syphilis, and in others malaria may deserve attention. (9.) Treatment other than prophylaxis or that proper for syphilis or malaria is negative.

Dr. Boas does not seem to recognize cases in which over-exertion and not exposure to cold is the apparent cause of the paroxysmal attack.

DIAGNOSIS OF FLOATING KIDNEY.

A writer in the *Revue de Médecine*, No. 1, 1883,[1] points out that displacements of the kidney were studied first by Mesné and Riolan, and have been discussed by Rayer, Fritz, Lancereaux and Lecorché, while they have formed the subjects of clinical lectures by Trousseau and N. Guéneau de Mussy. These cases have almost always occurred in women in middle life after a fall, a walk, or without apparent cause. The physical signs are those of a globular tumor, of the size of a fist, which changes its place, and can often be pushed into the position of the kidney, when all the disagreeable subjective symptoms cease. When it is compressed the patient feels a peculiar nauseating sensation. The lumbar region may show a concavity, and be less dull on percussion. The tumor swells at each monthly period, and causes much pain. He gives details of two cases in which no opportunity occurred of confirming the diagnosis. In another a young phthisical lady, after a violent shaking, was taken with great pain in the abdomen, radiating down the legs. To the right of the umbilicus there was a hard, nodular, movable, painful tumor, which was thought to be a floating kidney, the urine having greatly diminished since the accident. At the necropsy the right kidney was found in its place, and in front of it an irregular, yellowish tumor, of the size of an orange, consisting of the gall-bladder full of calculi. The gall ducts were six or seven inches long, which explained and permitted the displacement.

SUDDEN DEATH AND COMA IN DIABETES.

Dr. Fr. Th. Frerichs, of Berlin, read a long paper on this subject before the Verein für Innere Medicin of Berlin last June, which is now published for the first time.[2] Dr. Frerichs has a right to speak with some authority on this subject from previous work in it; the present paper, however, is an important addition to earlier contributions. It is based upon a consideration of four hundred cases of diabetes in the writer's own practice, as well as upon a knowledge of the general literature of the subject, and is accompanied by supplementary contributions from Drs. Ehrlich and Brieger, Frerichs' assistants, upon "the presence of glycogen in the diabetic and in the normal system," and giving the results of chemical investigations touching diabetic coma. The whole forms certainly the most important essay upon diabetic coma and sudden death in diabetes which has yet been given to the profession.

Frerichs begins with the statement that every diabetic exposed to the degenerative influence of the disease upon the chemical changes within the organism is, in addition to the now slow now rapid failure of digestion and nervous energy, constantly threatened with the danger of sudden and unexpected death. Such death may occur with symptoms resembling syncope, paralysis of the heart, collapse, but more frequently with severe functional disturbances of the nervous centres accompanied often, though not always, by unrest and marked difficulty of breathing. In regard to the direct causes of this form of death, its relative frequency, and to some extent even in regard to the accompanying symptoms, there is still much obscurity in spite of what has hitherto been published on the subject. He then endeavors, by a careful review and analysis of his own four hundred cases, of which a considerable proportion ended in sudden death, to present a picture of the symptoms, the course, and the frequency of diabetic coma and its attendant processes, and to state the cause of these mysterious processes in so far as any positive ground exists for doing so. But such a picture becomes less simple and homogeneous than has hitherto been supposed.

Frerichs divides his cases of sudden death and coma into three groups: I. includes diabetics suddenly attacked, generally after previous effort, with general weakness, and who expire with cold extremities, small failing pulse, drowsiness, and unconsciousness in a few hours. Of such cases some were already worn and emaciated, others still well nourished, and even fat. II. comprises cases which differentiate themselves from the preceding by a longer duration of the process as well as by a variety of symptoms. In these there were generally prodroma, as general weakness, digestive disturbances, constipation, a pharyngitis, a local phlegmon, with tendency to gangrene, a bronchitis, broncho-pneumonia, etc., etc., to which the graver symptoms succeeded. In these the breath gave out a peculiar smell resembling fruit, or chloroform, or acetone. Exceptionally in these cases the drowsiness disappeared to return again, or now and then to give place to a lasting improvement. The whole of the above process can take place in twenty-four hours, and lasted at most, as a rule, from three to five days, though occasionally much more prolonged. III. includes cases in which the patients, without any dyspnœa or feeling of anxiety, with a fairly full radial artery and pretty good general strength, were seized with headache, a drunken feeling, with uncertain gait, and drowsiness, and gradually sank into the deepest coma, from which they never awoke. In such cases also the breath had the characteristic smell, and the urine gave a burgundy-red color upon the addition of chloride of iron.

As to the frequency of coma, Frerichs, for several

[1] London Medical Record, February 15, 1883, page 50.
[2] Zeitschrift für klinische Medicin, vol. vi,. Part 1, 1883.

reasons given, does not at present say more than that it occurs much more frequently in diabetes than has hitherto been supposed, and with phthisis constitutes the great peril of the disease. The *diagnosis* need not remain in doubt with a careful regard to the symptoms described and an examination of the urine; the smell of the breath should not be relied on, for though generally plain and very characteristic it occasionally is scarcely perceptible or entirely absent. The *prognosis* is very unfavorable. There are, however, rare exceptions, of which two are given, in which a pause and retreat occur in the process of poisoning once begun.

Treatment. Various trials have been made of transfusion of blood and injections into the blood of weak saline solutions, with the exhibition of peroxide of hydrogen and stimulants, the injection of ether, the administration of anti-zymotics, etc., etc., but all without avail. Frerichs says there are as yet no therapeutics of the condition, and where he has seen improvement he has been at a loss to understand the cause.

THE CAUSE AND THE NATURE OF DIABETIC COMA.

Frerichs takes up and discusses in turn the various explanations hitherto advanced: (1.) Changes in the nervous centres. (2.) Change in the blood, viscidity from excessive sugar, change in the form and function of the blood corpuscles. (3.) Uræmia. (4.) Fat embolism. (5.) Acetonæmia. (6.) Deranged elimination of the products of excretion. He considers all of these either disproved, or unsupported as explanations of diabetic coma. He has been unable to verify in his autopsies the presence of fat emboli in the capillaries, and the term acetonæmia should, he thinks, be banished from pathology. The cause of death, he argues, is not the same in all these cases. In the cases included in the first group the cause of death is to be sought in the paralysis of the heart, brought about by the degeneration and destruction of the muscular fibres, whereby a rapid tissue transformation takes place, as shown by the presence of glycogen in the young muscle-fibres.

In the cases of the second and third groups death is the result, evidently, of a process of poisoning or intoxication, the result of a series of slower or more rapid processes of transformation in the blood, the final products of which we are acquainted with, as acetone and *acetessigsaüre*, whilst the preceding steps of such processes are still unknown, and will be very difficult to detect on account of the ready and rapid changes which the materials of this series undergo. Frerichs designates the process simply as diabetic intoxication or poisoning, which is at once a declaration of negative knowledge and positive ignorance.

Fourteen cases, of which four died with coma, four with phthisis, one with dysentery, were investigated histologically by Dr. Brieger with the utmost thoroughness. He found glycogen in various organs and tissues, but remarks especially upon its presence in the kidneys, not diffused, but strictly confined to a small belt of the parenchyma at the boundary between the cortex and the medullary portion, and this he regards as pathognomonic of diabetes.

—In the *British Medical Journal*, January 20, 1883, Dr. Arthur E. Barker reports a case of compound fracture of the femur, complicated with erysipelas and pyæmia, in which the thigh was amputated, and subsequently exarticulated at the hip, with complete recovery.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

MARCH 12, 1883. DR. CHARLES D. HOMANS presided.

DR. HAMILTON OSGOOD read a paper on

MISLEADING CARDIAC MURMURS AND EXPIRATORY AUSCULTATION OF THE HEART.[1]

DR. BOWDITCH said such cases should lead us to extreme care in examining. He has several times met with abnormal sounds, there being no other physical or rational sign of disease. Such sounds are apt to be modified by the respiratory act. This modification of the sound and the absence of other signs of disease leads him to believe the cause of the sounds to be a change in the form of the vessel near which the sound is heard, owing to more or less compression of the vessel during the respiratory act or some part of it. He thinks that in such cases applicants should be accepted by life insurance companies. We should be very careful in cases of murmurs with no other signs of disease about giving prognoses that may affect the comfort of life. Twenty years ago he had detected a slight mitral murmur with no other rational or physical sign of disease. He stated then to the patient that he did not believe there was any serious lesion, and he had examined the patient again a few months ago, finding the identical sound. We are not to believe all cases of murmurs fatal. Cases may go on as well with murmurs as without them.

DR. ABBOT referred to the well-known instances of murmurs in close proximity to the heart, caused by pressure of indurated lung, and cited a case of his own where a systolic souffle was distinctly heard from the base of the heart on the left side to the subclavicular region, apparently caused by the pressure of the lung, condensed by tubercle, on the vessels beneath. In the same patient a distinct crepitus was produced over the edge of the lower lobe of the same lung by each stroke of the heart, the heart's impulse being the obvious cause.

DR. F. C. SHATTUCK said that he had heard murmurs accompanied by no other signs, and had examined them in all ways, but had not got so far as Dr. Osgood. Subclavian murmurs examined in the same way are sometimes louder in inspiration, sometimes in expiration. He has no theory as to the mechanism. Dr. Shattuck mentioned the paper of Rosenbach on Spurious Heart Murmurs produced in the Lung. Dr. Rosenbach advocates pressing with the finger in the intercostal space nearest the maximum intensity of the murmur in order to press the lung away from the heart, and the heart from the chest wall. If it is true that it can be so pressed away Dr. Shattuck thinks the effect would be practically the same as by Dr. Osgood's procedure, it being Dr. Rosenbach's theory that the murmur is produced by interaction of the heart and lung.

In answer to Dr. Gannett, who inquired if the sound had the characteristics of a friction sound or of a souffle, DR. OSGOOD said that it lacked the hard character of a friction sound, as well as the marked

[1] See page 289 of this number of the JOURNAL.

quality of a valvular murmur. It, perhaps, rather presented a modification of both. It suggested a valvular sound not well pronounced.

In reply to Dr. Knight's criticism of his use of the term "blowing" in reference to adventitious sounds Dr. Osgood said it was difficult by the use of any of the common terms to convey to another the real character of an adventitious sound.

To this DR. KNIGHT agreed.

DR. J. J. PUTNAM said that he had several times heard the false murmurs spoken of by Dr. Osgood, and had presumed them to be due to the displacement of air in a portion of the lung. He had not verified Dr. Osgood's interesting statement that these murmurs disappear after forced expiration, but recalled one case at least where they had remained during moderate inspiration and expiration, and in spite of holding the breath. Dr. Putnam thought Dr. Osgood's explanation of the phenomenon not satisfactory because it cannot be assumed that there is any greater pressure over the heart during inspiration than during expiration, inasmuch as the lung is not forced in over the heart, but is as it were sucked in, in consequence of, and in proportion to, the reduction of pressure due to the motion of the chest wall.

DR. OSGOOD replied that he did not believe it possible for the action of the heart to cause an audible movement of air in the lung during suspended respiration. Quincke's theory, accepted on all hands, proves that the left lung may be retracted during expiration, thus allowing a hæmic murmur to arise by pressure of the pulmonary artery against the chest wall, this murmur disappearing on inspiration by intervention of the lung between the artery and the thorax.

DR. KNIGHT said that very little is established as to the cause of any murmur, however simple, much less than we supposed some years ago, and that when we go beyond the simplest murmurs we are still more in the dark. He thinks we ought not to give the slightest importance in prognosis to the mere existence of murmurs. It depends on what we think is the cause of the murmur. The murmur alone is of no value.

DR. ROTCH asked Dr. Osgood if he had percussed his patient during forced expiration, in order to ascertain whether the lung had really retracted from the pulmonary area, thus leaving the pericardium free at that point where the murmur was heard.

DR. OSGOOD replied that he had omitted to do this.

DR. ROTCH then stated that it was very doubtful whether the lung on forced expiration was withdrawn from the pericardium as high as the second interspace. Some experiments on living subjects, which he had made to determine the cardiac area, covered or uncovered, on deep inspiration or deep expiration, would seem to support his statement, as did also the results of his examinations on the cadaver, where in a number of cases he was enabled, by means of a tracheal tube and clamp, to determine the shape assumed by the lung when retracting before the pericardial sac, as it was slowly distended with fluid. He therefore thought that even when the murmur in Dr. Osgood's case disappeared on forced expiration yet that the phenomenon was not caused by the lung having left the pericardium uncovered at the seat of the murmur.

DR. BOWDITCH, having reference to an earlier part of the discussion, said he protests against using the words rubbing and murmur, one for the other. In his judgment there is as much difference between a bellows murmur and a friction sound as there is between mucous râles and sonorous râles. They are different, and it will be unfortunate if we mix them.

STRANGULATED UMBILICAL HERNIA.

DR. GANNETT showed the specimen and reported the case. Seven years ago the patient had what was supposed to be intussusception, was given morphia, and got relief in three days. Since then there had been another similar attack. The third attack was nine days ago. Morphia was again given largely. A slight dejection occurred after three or four days, but death finally resulted, apparently from exhaustion. The intestine probably pushed a sac of peritonæum through the umbilicus, and then went out again, with relief, but on the last occasion the hernia contained so much fæces that it could not be emptied. There were found three sacs of intestine, one in the hernia, filled with fæces, one above the obstruction, also much distended, and a smaller empty one below.

NERVOUS COUGH.

DR. BOWDITCH reported a case of cough lasting sixteen months, apparently, except for the duration and violence, a case of typical whooping-cough. Laryngoscopic examination showed nothing. At the lowest part of the chest, outside the heart, was crepitation for a space of one or two inches, but no dullness. He supposed the cough to be nervous.

DR. KNIGHT said that he had seen many cases of what he thought nervous cough, and which were usually benefited by nerve sedatives. One case had yielded to enormous doses of quinine, beginning with two grains, and gradually reaching fifteen or twenty at a dose.

BACILLUS OF TUBERCULOSIS.

DR. ERNST showed some specimens which had been cultivated in Koch's manner. He had made sections of the lung, liver, spleen, and peritonæum. The sections had failed with two of the organs for various reasons, but he was able to show the bacilli in great numbers in the spleen and peritonæum, and not only in the tubercle but in the normal tissues as well, this being, he believes, the first time that it has been done since Koch's experiments, certainly the first time in this country.

DR. BOWDITCH asked as to the completeness of the chain of proof connecting the bacilli with the disease, and whether we have a right, from our present imperfect knowledge of the precise relation these bodies hold toward man in health and in disease, to assume decidedly that consumption is contagious.

DR. GANNETT said that Koch is as open in describing his methods as any one can be.

DR. WHITE said that whatever opinion we may form as to the correctness of Koch's deductions, he is certainly, judging from his writings, one of the most honest, careful, and correct observers that we have.

— During the year 1880 no fewer than 19,060 human beings and 2536 cattle are reported to have been killed in India by snakes; in 1881 the numbers fell to 18,610 human deaths, and 2032 head of cattle lost. In 1880 the number of snakes reported as killed was 212,776; in the following year it reached 254,968.

RHODE ISLAND MEDICAL SOCIETY.

A QUARTERLY meeting of the Rhode Island Medical Society was held in Providence, March 15, 1883. The President, DR. JOB KENYON, occupied the chair.

Seventy-three Fellows attended.

DR. G. TABOR SWARTS read a collation of

SANITARY STATISTICS REGARDING THE RECENT EPIDEMIC OF TYPHOID FEVER IN PROVIDENCE.

These figures were founded on a personal inspection of the houses and surroundings in two hundred cases of typhoid fever, and are introductory to a fuller study of the subject.

Age.	No. of Cases.
1 to 5 years	15
6 to 10 "	32
11 to 20 "	81
21 to 30 "	44
31 to 40 "	17
41 to 50 "	6
51 to 60 "	5
	200

Males, 111. Females, 89. White, 195. Colored, 5.

The two hundred patients followed forty-one vocations, distributed as follows: school children, 62; sedentary and in-door occupations, 85; out-door occupations, 9; occupations necessitating constant change of temperature, 27; unascertained, 17.

Fair sanitary conditions were found in sixty-four instances, and dangerous or poor sanitary surroundings in one hundred and thirty-six cases. There were nine instances of crowding to a dangerous extent in tenement houses. In twenty-five instances the house was in a filthy and closely built neighborhood, and the air impure from unclean premises.

Thirty-two cases were found with untrapped sinks so located as to have contaminated the air used by the patient by day or night. There were seven instances of privy vault contents flowing on the ground, and thirty-five instances where sewage flowed on the ground or into the cellar. Swill or garbage was found decaying on the surface or in a privy vault in thirty-two cases. Swill was found in the cellar of one house in which there had occurred five cases of typhoid fever with two deaths. In ten instances there was close proximity of sleeping room to a privy vault or the ventilator of a cesspool. In fourteen cases there was leakage under the sink, contaminating cooking utensils. Well or cistern water which might have been contaminated had been used in twenty-two cases.

In about one tenth of the cases disinfectants were used before the sickness began; in fully one half the cases they were used more or less thoroughly after the sickness commenced. The milk and ice used probably had nothing to do with the disease.

In conclusion Dr. Swarts gave blackboard illustrations of some defective traps which he had found in the public school-houses.

DR. PARSONS inquired whether the bad sanitary conditions appeared to have caused sickness among the pupils.

DR. SWARTS in reply gave an account of one school in which there were many cases of diphtheria and measles. In this case surface water had run into and filled the privy vault, and the overflow from the vault had found its way into the cellar of the school-house, where there was a pool of foul water two feet deep.

SIMULATED AMAUROSIS. — TUMORS OF THE ORBIT. — IMPAIRMENT OF THE RETINA BY EXPOSURE TO THE SUN'S RAYS.

DR. H. G. MILLER reported three cases: —

I. A case of malingering in a pension claimant who complained of amaurosis of one eye. Ophthalmoscopic examination showed no lesion, and led to the supposition that there was an attempt at malingering. The test by the stereoscope proved that he used both eyes. The same man claimed intermittent otorrhœa, but examination disclosed no lesion of the drum-membrane or external meatus.

II. Woman, aged fifty. Following some injury to the head, four years ago, the eye commenced to protrude. Two years later a new growth in the upper and interior portion of the orbit commenced to push the eyeball downwards and outwards. She sought an operation because the eyeball was no longer covered, and in danger of destruction from exposure. The anterior tumor was easily removed, but it was necessary to remove the eye to reach the second tumor, which pressed upon the optic nerve, though not connected with it. Cellulitis and constitutional disturbance followed the operation. The patient is still under treatment. The tumors have not yet been examined microscopically. The gross appearance is that of fibrous trabeculated structure not resembling any of the malignant tumors of the orbit.

III. A man, aged twenty-five, undertook to observe the transit of Venus with the naked eye. The sight was blurred, and three days afterwards he sought advice, complaining of a vibrating central spot, like the so-called "flimmer-scotom." $V=\frac{5}{20}$. Ophthalmoscope shows a whitish, irregular spot at region of the macula.

Rest was ordered, and a moderately dark room. Six days later the spot at the macula was less perceptible. $V=\frac{8}{20}$. Vibrating scotoma diminished. One month later, $V=\frac{9}{20}$. Spot at macula now appears bright red. The first appearance was as though the retina had turned white. The lens probably acted as a burning glass.

PNEUMONIA.

DR. S. S. KEENE read a paper on Pneumonia, reviewing the venerable traditions regarding phlebotomy and antimony which long misled the profession, giving interesting personal reminiscences of the champions of the "heroic" school, — Broussais, Bouilland, Rasori, and Nathaniel Chapman, — and tracing the development of the modern pathology and treatment of the disease.

DR. D. H. BATCHELDER defended the lancet and tartar emetic. He stated that he had attended 487 cases of pneumonia, of which he bled 376. He had lost only nine cases, and seven of the nine were not bled. He does not bleed patients under five years of age.

DR. E. M. SNOW read a paper on the

EARLY HISTORY OF VACCINATION.

The practice of vaccination was introduced into New England by Dr. Benjamin Waterhouse in the summer of the year 1800. Physicians generally adopted the practice, and there were some persons, not physicians, who made a business of vaccination, traveling about the country for that purpose. Among these was Artemas Stebbins, who, when eighteen years old, in 1806, lived with Dr. Waterhouse, and learned the art of vaccination. He made a business of it for life, and con-

tinued to practice it until his death in 1870, a period of sixty-four years. He traveled extensively in Massachusetts, Rhode Island, and Connecticut, vaccinating among the country people for a small fee. Mr. Stebbins, not long before his death, told Dr. Snow that he had vaccinated over 138,000 persons.

Another man who also learned the art of vaccination from Dr. Waterhouse was Sylvanus Fansher. In the year 1810 he was employed to vaccinate the people of Providence, and was then called an "experienced operator." He vaccinated 4305 persons, and was paid by the town the sum of $233.25 for the service, including six weeks' board at $3 per week, receiving therefore exactly five cents each for those vaccinated.

Other public vaccinations were directed by the town from time to time until 1856, when the plan was adopted of having a regular weekly vaccination at the Health Office, and this has been continued to the present time, with a record of all the vaccinations performed. Since July, 1856, 28.365 persons have been vaccinated in Dr. Snow's office. The average for twenty-six years has been 1091 annually.

Dr. W. J. Burge reported a case of

SPONTANEOUS SEPARATION OF THE FUNIS.

While the mother was attempting to rise from the bed, the child was born, and dropped to the floor, breaking the funis about five inches from the umbilicus. Dr. Burge arrived soon afterwards, and found the child alive and crying vigorously. He ligated the cord as a matter of routine, though there had been no hæmorrhage.

The President reported a similar case occurring in his practice, the funis breaking five or six inches from the umbilicus. In this case, however, the child died.

Dr. E. A. Kemp reported a case of malignant sore throat, which proved fatal on the eighteenth day.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

were elected as follows: W. E. Anthony, D. H. Batchelder, W. S. Bowen, W. J. Burge, S. B. Church, S. W. Francis, G. D. Hersey, S. Hunt, J. Kenyon, G. H. Kenyon, C. B. Mathewson, H. G. Miller, C. W. Parsons, H. J. Pomroy, F. H. Rankin, A. A. Saunders, G. W. Stanley, O. C. Wiggin.

As recommended by the Board of Censors, Dr. J. A. B. Tanguay, of Providence, was elected a Fellow.

NEW YORK ACADEMY OF MEDICINE.

THE REGULATION AND REPRESSION OF PROSTITUTION.

At a stated meeting of the Academy of Medicine, held March 15th, Dr. Frederic R. Sturgis read a paper on the above subject, which, he said, had engaged the attention of statesmen and physicians from time immemorial, and yet which involved problems that were still far short of solution. In considering the problems thus concerned he would make no attempt to go over the whole ground, which was too extensive to be covered in one evening; but would confine himself to three propositions, namely, (1.) The causes of prostitution; (2.) The necessity of regulating the evil; and (3.) The results thus far achieved in this direction by legislation.

Before taking these up, however, it was advisable to consider the definition of the term prostitute. It was often understood to mean simply a woman who used her body for purposes of living, or, in other words, who made a business of this for her support. But if the word were used in this restricted sense, it would exclude a very large class of impure women, and also the most important class, so far as the necessity of restriction of prostitution was concerned.

The statistics of prostitution were as yet very meagre on this side of the water, as the subject was regarded as a tabooed one; but, nevertheless, the matter was a very serious evil, and a growing evil, especially in our large cities. The necessity for its restriction was, therefore, becoming more and more urgent. The only work that had as yet been published in America on this subject was that of the late Dr. Sanger, and too much praise could not be awarded him for the patience and industry with which he had accumulated the facts it contained.

As to the causes of women becoming prostitutes, many of the foreign writers assigned the first lapse from virtue to misplaced affection. There were, however, many other causes which this class of women would be likely to reveal only to their medical advisers. Mr. Acton assigned a variety of causes, and chief among them, the temptation of the man. After this he enumerated sexual instinct, natural depravity, idleness, love of pleasure, poverty, absence of home influences, and the effect of certain occupations. Dr. Sturgis also gave the causes assigned by various other writers, both French and English, and then went on to say that out of 2000 prostitutes questioned on this point by Dr. Sanger, 513 ascribed their fall to inclination, 525 to destitution, 258 to seduction and desertion, 181 to drink, 164 to ill-treatment at home, 124 to the desire for an easy life, and 84 to the influence of bad company. This question was probably the most important of the series of inquiries which he put to all the prostitutes coming under his observation; and the fact that more than one fourth of the entire number replied that they voluntarily resorted to prostitution merely for the gratification of passion, was certainly a startling one. Such an answer would seem to imply an innate depravity in the female sex, which was altogether incredible; but the real truth of the matter was, probably, that in almost all these cases there were other and outside influences concerned, of which the women did not speak. The full force of sexual desire was seldom experienced among virtuous women. Man was almost invariably the aggressive party, and one peculiar point to be noticed in the statistics of all three nations, England, France, and the United States, was, that in the matter of prostitution man was the most culpable. In the majority of cases, however, it was manifestly impossible to employ the same restrictions with the male that could be enforced in regard to the female. As the first great cause of prostitution, therefore, Dr. Sturgis would assign the bad influence of man.

In the second place, in this country, at least, he placed love of dress. Here the desire for luxuries was continually increasing among all classes, in a measure far beyond the means for gratifying it, and it was this which induced so many men to engage in speculation and gambling.

Among women it was not infrequently the case that they resorted to prostitution occasionally for the gratification of the desire for some special luxury which

they could not otherwise obtain. The cause third in importance he believed to be the absence of proper home influences. It was also largely fostered by the prevailing habit of crowding in tenement houses in New York, and this he assigned as the fourth cause here. The herding together of families was, indeed, accepted as a prominent cause of prostitution by all statisticians both in this country and abroad. The over crowding of tenement-houses was undoubtedly one of the crying evils of the day; but he felt assured that in due course of time it would be done away with by legal enactment.

The fifth cause, he thought, was the spread and increase of luxury in the community. This affected the higher class of prostitutes principally; the lower class being comparatively little influenced by it. It had been found, however, that from the well-to-do prostitutes there was greater danger of the contraction of syphilis than from any other.

These causes necessarily all operated together, he went on to say. Thus, as man was primarily responsible for woman's prostitution, so the love of dress was naturally involved, since, as these women often remarked, it was part of their trade to make themselves look as attractive as possible. This desire to please, indeed, no doubt induced many who were just on the brink of prostitution to take the fatal step.

Coming now to the second proposition, the necessity of regulating the evil, he said that the opposition to taking any public notice whatever of prostitution was so strong that in St. Louis the legal restrictions which had been placed upon it, and which had apparently been beneficial, had had to be abandoned. The opposition to its regulation was based on three grounds: first, that it was absolutely wrong to take notice of such an evil; second, that if it were so bad it was better to let it go on until it culminated, so that those who suffered from it would learn its banefulness, and the matter would thus right itself; and, third, that where measures had been adopted for its regulation they had not been attended with as favorable results as had been anticipated. In order to be convinced of the necessity for its restriction it would be necessary to form some estimate of the number of prostitutes in New York. Dr. Sanger had computed that in 1857, when the population of the city was 700,000, there were about 6000 open prostitutes, or about one in every 117 of the total number of inhabitants. After giving the statistics of Déprés in regard to the prostitutes of Paris, Dr. Sturgis proceeded to form an estimate of the amount of syphilis in the city of New York, which was founded on the statistics of a number of hospitals and dispensaries collected by him in a paper which he read before the American Public Health Association in 1874. He next went on to speak of the change which had occurred in the female syphilitic patients admitted to Charity Hospital since he first commenced his service in the venereal wards there eleven years ago. At that time the women were generally from thirty-five to forty years of age, and were suffering either from chancroid or quite old syphilitic lesions. Within the last three or four years, however, he had found that the mass of the patients were much younger, and were affected with highly infectious and contagious lesions. These younger women, being more attractive, were of course much more dangerous to the health of the community. Among the better class of prostitutes it was found that syphilis was exceedingly common, and this, no doubt, accounted for the increase of syphilis that had of late been noted in private families. Married men not infrequently inoculated their wives with syphilis before they were aware that they themselves had contracted the disease, and thus the innocent were made to suffer with the guilty. Syphilis was unquestionably often communicated also by unmarried men to members of their families in a perfectly innocent manner, so that there seemed to be every reason for supposing that the disease was increasing. The danger was not so great to those who became inoculated with it as to those who came after them, and the state of the public health seemed, therefore, to demand that something should be done for the suppression of the evil.

Dr. Sturgis next took up his third topic, the results achieved in the way of regulating prostitution. In England the attempt had only been made in the seaport and garrison towns, but in all the other nations of Europe more general measures had been adopted. In France this regulation had been inaugurated by Napoleon I. for the protection of his army, and had been maintained ever since except during the existence of the Commune in Paris. In Germany it had been in force for fully as long a period, but in Italy it had been adopted more recently. In England, under the Contagious Diseases Act, both men and women were under control, and it had been found that syphilis had markedly diminished in the towns to which the act applied. In France and Italy the legal regulation of prostitution had had the effect of increasing the clandestine class of prostitutes, and these were believed to be the most dangerous as regards the spread of syphilis. After describing the regulations that were in force in Paris Dr. Sturgis expressed the opinion that it would be impossible to secure the enactment of any such rules in this country at present, as public feeling was clearly opposed to it, and it was the general opinion that a woman had a perfect right to do whatever she wanted to with her own body. Still he thought that much good might be accomplished without this. Among the best class of houses of prostitution it was the rule that the inmates should subject themselves to medical inspection once a week, and this practice might, perhaps, be extended. In Charity Hospital it had formerly been the rule that when patients came under treatment for venereal trouble they could be forcibly restrained from leaving until it was deemed safe by the attending surgeon for them to do so, but about six years ago this excellent rule had been rescinded through the influence of certain philanthropic but misguided individuals. If it were restored it would undoubtedly remedy a large amount of the trouble from syphilis among the lower classes. Dr. Sturgis then mentioned one peculiar result that had been noticed in Europe from the regulation of prostitution, and that was that it tended towards the depopulation of the country, since in proportion as this had been stringent the number of marriages had decreased, or else marriage was entered into at a comparatively later period in life. In this country such a danger was of course too remote to receive any attention. In conclusion Dr. Sturgis said that it was exceedingly desirable to accumulate data on the subjects of syphilis and prostitution, and enumerated the rules which had been laid down by the International Statistical Congress at St. Petersburgh for the collection of accurate statistics in regard to syphilis.

At the conclusion of the paper the President, Dr. Barker, remarked that as the maintenance of the public health was one of the objects of the Academy he had made it a rule to devote one evening during each year to a discussion of some one branch of this subject, and hence it was at his suggestion that Dr. Sturgis had prepared his excellent paper. He had also taken the liberty of inviting the Hon. John R. Brady, judge of the Supreme Court, to be present, and make some remarks on this important matter.

Judge Brady having been introduced by the Chair, referred to two exhaustive articles on the regulation of prostitution which had appeared respectively in the *Westminster* and *Contemporary Reviews*, and stated that the writers had not been able to come to any definite conclusions in regard to the subject. He certainly did not believe that the time had yet come for any legislative restrictions in this country, and when in Europe such regulation had been found to increase clandestine lewdness, and to have a tendency towards depopulating the country, he did not wonder that Dr. Sturgis had hesitated to recommend the adoption of any such measures here. He did believe, however, that such enactments might, perhaps, be secured as would place those suffering from syphilis under medical surveillance, and require that when once admitted to hospital such patients should remain there until it was deemed safe for them to leave. The judiciary had always been arrayed against the institution of prostitution here, and any woman who was proved to be a prostitute could be committed for six months as a vagrant. The difficulty of suppressing public prostitutes depended principally on the migratory character of this class of the community, and as to clandestine prostitutes it was almost an impossibility to reach them at all. In his opinion no real reform could be accomplished except through the medical profession. It was on physicians that the responsibility of this matter rested, and it would be necessary that they should put their shoulders to the wheel and go on with the work perseveringly until they had brought the community at large to a correct appreciation of the evils of prostitution and syphilis.

A letter was then read from Dr. A. P. Gihon, United States Navy, and remarks were made by Drs. L. Weber and R. W. Taylor, all urging a more general study of syphilitic disease on the part of physicians, and the duty of the profession to spread among the community a more complete knowledge of its dangers and results, after which Dr. Sturgis, in a few brief remarks, brought the discussion to a close.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. Nancrede, M. D., Recorder.

Thursday evening March 8, 1883. The President, Dr. James Tyson, in the chair.

Specimens of Cancer involving the Stomach, Liver, Pancreas, Rectum, and Lung.

Dr. Guy Hinsdale exhibited a series of specimens. They were obtained from recent cases at the Episcopal Hospital.

Case I. Carl W., aged forty-four, was admitted October 23, 1882. He had never been ill before, and his symptoms had been developed during the two weeks previous to admission. His bowels were regular, he had had no vomiting, but had pain at the lower margin of the left ribs, with cough and friction sounds. Cachexia was marked. The abdomen was soft; a tumor was felt in the left hypochondriac region. The spleen was distinctly felt, and enlarged.

The tumor increased in size, became more tender, and pain was at times very severe. The patient's appetite was gone, and emaciation was extreme. Twenty-six days after admission death occurred.

At the autopsy fluid was found in the pleural, pericardial, and abdominal cavities. There were old pleuritic adhesions. The roots of the lungs, the base of the left lung adjacent to the diaphragm, and the pleura beneath the ninth and tenth ribs, were found to be the seat of cancerous deposit. The bronchial and thyroid glands were very much hypertrophied, but not cancerous.

The cardiac extremity of the stomach was the seat of an extensive cancer, but the cardiac orifice was not involved, and the mucous membrane not destroyed. The pyloric end was intact. The pancreas was the seat of cancerous growth. The liver was of a dark, mottled color, and showed numerous metastatic growths in an early stage of development; its weight was five pounds nine ounces. The spleen was greatly enlarged, and the seat of small secondary deposits. Kidneys normal.

Microscopic sections of the thyroid gland showed simple hypertrophy; sections of the metastatic growth in the liver showed scirrhous cancer.

Case II. James S., aged forty, admitted September 28, 1882. During two months previous to admission he had lost forty pounds of flesh, his skin had become very sallow, and vomiting, which at first was occasional, finally occurred after every meal. A tumor was distinctly felt on the left side above the umbilicus; it moved with respiration, and was painful on pressure. Albumen was present in the urine. The patient's mother had died of cancer of the stomach.

After admission the tumor increased in size, the patient grew weaker, vomiting frequently, and passing clay-colored stools. Death occurred on the thirty-eighth day after admission.

At the autopsy the heart, lungs, kidneys, and spleen were found in a normal condition; the stomach was very much dilated, and contained undigested food. A cancer was found at the pyloric extremity. The walls of the pylorus were very much thickened, and its orifice admitted the thumb with difficulty.

The liver was detached, and found to be the seat of four large bosses of secondary cancer. Its weight was three pounds fourteen ounces. The gall-duct was unobstructed.

A microscopic section of the growth in the stomach showed scirrhous cancer.

Case III. *Cancer of the Stomach; Gastro-Colic Fistula.* C. W., aged sixty-six, was admitted June 13, 1882. His health had been good until four months previously, when he vomited some dark bloody matter. Pain was occasional, and occurred after eating. Vomiting had occurred once. Jaundice began three weeks before admission; the skin was dry, and the body not much emaciated. Stools regular, but clay colored. The liver was slightly enlarged. Distinct nodular masses, slightly painful on pressure, could be felt in the epigastric and umbilical regions. The inguinal glands were slightly enlarged; the axillary glands remained normal. There was no cough. A faint, low

systolic murmur was heard at the aortic cartilages. The urine was dark yellow, specific gravity 1010, and contained no albumen. Vomiting, emaciation, and jaundice progressed, the tumors increased in size, and death occurred two months after admission.

At the autopsy a cancer was found at the pylorus. A fistulous opening large enough to admit the forefinger was found to exist between the stomach and transverse colon, which were infiltrated by the cancerous deposit and adherent to each other. The calibre of the colon was small. The mucous membrane of the stomach at the seat of disease was ulcerated and ragged. There was no dilatation or hypertrophy of the walls of the organ. The gall-bladder was distended, and both the pancreatic and common bile ducts were obliterated. Heart, kidneys, and other organs showed nothing very unusual. The mesenteric glands were slightly enlarged. The spleen was small, and its hilus the seat of a hard calcareous plate; the organ was displaced, lying close against the diaphragm, some distance from the chest wall, accounting for the perfect resonance which had been noted in the splenic region.

CASE IV. *Rectal Cancer; Colotomy.* John M., aged seventy-one, was admitted to the hospital October 26, 1882. He had always been healthy until three months previously, when the movements of his bowels became irregular.

The patient suffered from diarrhœa. His urine was albuminous, and contained hyaline casts. He had hydrocele. He denied specific history. Exploration of the rectum revealed a malignant stricture an inch and a half from the anus.

On account of the patient's age operative measures were not contemplated until the passages became very difficult, and hiccough and stercoraceous vomiting demanded relief. This was temporarily afforded by the operation of left lateral colotomy, which was performed by Dr. John H. Packard. Death ensued twenty-four hours later.

At the autopsy the wound was found in good condition; the descending colon was opened about three inches from the point of its bending downwards. An enormous cancer was found involving the rectum and posterior wall of the bladder, and nearly filling the true pelvis. All the other viscera were in good condition. Microscopic sections showed the cancer to be scirrhous.

CASE V. *Cancer of the Rectum; Secondary Cancer of the Liver.* Christian H. was admitted July 6, 1882. He was emaciated, weak, and cachectic. He stated that for twenty-seven years he had been perfectly well, but that two months previously he had noticed loss of flesh, and about the same time discovered a growth at the anus, which was small, but which gave him a great deal of trouble at stool. Two weeks later he noticed that his feet and legs had become swollen, but it was not till his admission to the hospital that he became aware that there was anything the matter with his abdomen. The patient's father probably died of cancer of the stomach.

The anal growth was excised, and proved to be an adenoid type of malignant disease. Vomiting, dyspnœa, and sallowness of the skin increased until his death, five weeks after admission.

The autopsy showed that the liver and rectum were the only structures seriously diseased. The liver was enormously enlarged and filled the whole upper portion of the abdominal cavity. It was slightly adherent to the diaphragm and adjacent viscera, and was studded with cancer nodules varying in size from that of a filbert to that of an egg, often coalescing, and pretty equally distributed over the surface. The whitish color of these nodules was in strong contrast with the dark color of the liver, giving it a variegated appearance. Its weight was ten pounds four and a half ounces. The walls of the rectum, six inches from the anus, were infiltrated with the new growth. This was the primary seat of disease. The secondary growth was very rapid, almost entirely painless in itself, and disturbing the patient only by mechanical irritation of the stomach, and the production of œdema and ascites by interference with the circulation. Jaundice did not occur.

Microscopic sections of the anal growth revealed an adenoid growth resembling an aggregation of Lieberkuhn's crypts. It was an example of an early involvement of the part. The growth higher up in the rectum was more advanced, and illustrated the encephaloid form of the disease. A section from the metastatic deposit in the liver showed a stroma of fibrous tissue with alveoli lined by epithelial cells, the peripheral cells retaining their *columnar* shape. It was an example of the reproduction in the liver of the same follicles found in the primary disease of the rectum.

(*To be concluded.*)

NORFOLK, VA., MEDICAL SOCIETY.

WILLIAM A. THOM, M. D., SECRETARY.

REGULAR meeting held Thursday, February 1, 1883, the President, DR. ALEXANDER TUNSTALL, in the chair.

After the appointment of the regular committees and sections, DR. F. B. STEPHENSON, United States Navy, by invitation, read a report of a case of

CHOLERA MORBUS.

M. G., aged twenty-nine, native of Pennsylvania, having had general good health during several years previous, — not known to have suffered from serious disease, not specially abusive of himself in any way, accustomed to moderate use of alcoholic drinks and tobacco, — was taken, during the night following June 23d, with symptoms of cholera morbus, which was probably caused by unusual diet, perhaps with some drinking. The morning of June 24th he had plain symptoms — emesis, retching being marked.

Subnitrate of bismuth seemed to quiet the stomach at that time.

June 24th. Patient was taken during the night, and is now suffering from intense nausea, occasional vomiting, and diarrhœa. He was ordered opium every three hours, mustard plaster over region of stomach, and a diet of milk and lime-water.

June 25th. Nausea yet severe. All articles taken into stomach were soon rejected. Treatment continued.

June 26th. He was somewhat better. A pill of opium, ipecac, and calomel was ordered every four hours, also beef tea. Temperature and pulse normal.

June 27th. He indulged in a pipe of tobacco; nausea and vomiting returned. He had been drinking water too freely. He complained of fullness of the bowels. Ordered large Seidlitz powder. At seven P. M., the saline no being followed by movement of bowels, a second was given.

June 28th. He reported bowels to have freely moved during the night. Nausea and vomiting ceased. Took beef tea in tablespoonful doses every hour. Temperature and respiration normal.

June 29th Patient was not so well. About ten A. M. had a hæmorrhage from the stomach, vomiting about four ounces of blood. Mustard plaster was applied over abdomen, and pounded ice freely given. Temperature and pulse normal. When seen at three P. M. there had been no more hæmorrhage. He was delirious; condition critical. He was given brandy and opium with beneficial results. Temperature and pulse normal.

June 30th. At five A. M. patient was found in a state of profound syncope, but soon rallied after administration of stimulants. He was ordered beef tea and brandy. Temperature normal; pulse very feeble and intermittent. At eight A. M. he attempted to reach close-stool, when he fell to the floor in syncope. He rallied after administration of brandy. Beef tea and brandy were continued. At eight P. M. he was in a state of collapse. Brandy and atropia hypodermically, hot bottles to spine, and stimulating enemata were employed. At ten P. M. bowels were freely evacuated in bed, the dejection consisting of dark, grumous blood, very offensive. He continued in an unconscious state till 1.10 A. M., July 1st, when he died.

Post mortem made fourteen hours after death.

Body was well nourished. Rigor mortis was well marked. Heart and abdominal viscera only were examined. The heart was slightly enlarged, enveloped in considerable fat, entirely empty. The liver was greatly enlarged and friable; upper surface very much discolored, of bluish hue; gall-bladder greatly distended. The stomach held about a pint of blood; external surface was normal; as to internal surface: in great curvature inflammatory change had occurred, marked congestion, softening and sloughing being apparent. The mucous folds inclosed a number of clots. The pyloric extremity was stained with bile. Dark, bloody effusions filled the intestines throughout. Spleen was contracted, friable. The kidneys and bladder normal. The brain and lungs were not examined.

In the discussion which followed Drs. R. B. Tunstall and H. M. Nash expressed the belief that the diffuse inflammation and sloughing indicated the presence of some irritant poison. Dr. Tunstall also spoke of the efficacy of large doses of bismuth in the treatment of hæmatemesis.

THE YELLOW FEVER PLAGUE FLY. — BRIGHT'S DISEASE.

Drs. Tunstall and Nash, in answer to questions, spoke of the yellow fever plague fly, declaring that in 1855 the fly appeared here about the time that the fever did, reached its greatest number during the worst of the epidemic, and gradually disappeared with it.

Dr. H. M. Nash reported a fatal case of Bright's disease in which dysuria was the only marked symptom. At the autopsy one kidney was found to have been completely destroyed, while disintegration was only beginning in the other. The patient had been active up to a few days before her death.

Dr. L. S. Foster reported a case in which, by mistake, six drachms of chloral hydrate and five drachms of bromide of potassium had been taken during one night. The patient was then out of danger without treatment.

Recent Literature.

Farmacopea Nazionale e Generale Materia Medica e Terapia. Del Prof. Dr. C. Ruata, Gia Assistente di Materia Medica Presso la R. Università di Padova. Verona e Padova: Drucker & Tedeschi. 1883. 8vo. Pages viii., 970.

This work was prepared for the purpose of collecting into one volume an account of all the drugs and pharmaceutical preparations recognized in the pharmacopœias of most of the civilized countries, to give their physiological action and therapeutic uses, and to suggest a pharmacopœia to Italy that could serve as a guide to physicians and pharmacists, and finally for those who wished to possess an example for the much desired official National Pharmacopœia.

It contains, besides the preparations proper to it as a proposed national pharmacopœia, all the pharmaceutical preparations of the pharmacopœias of Sardinia of the edition of 1853, of Orosi of 1866–67, of the Campania of 1823, of Austria of 1869 and 1879, of Belgium of 1853, of Denmark of 1868 and 1876, of France of 1866, of Germany of 1872, of England of 1867 and 1874, of Russia of 1880, of the United States of 1870. It is to be followed immediately by an appendix containing the changes in the new revision of the United States and German Pharmacopœias of 1882. All the headings of its articles are arranged in one alphabetical list, and their synonyms in the other pharmacopœias given. Descriptions of the official and of allied varieties follow, with methods of identification, and of detection of impurities and of sophistication. All their different proximate principles and pharmaceutical preparations, with their physiological action and therapeutic uses, are then given. The incompatibilities and doses are also mentioned. It contains tables of the weights and measures of the various pharmacopœias; also of the maximum single and daily doses from the German. It gives practical suggestions upon methods of administration. The alphabetical and therapeutical indices are very full.

This commentary or dispensatory upon a suggested national pharmacopœia compares thus very favorably with such familiar similar works as our United States or National Dispensatories, and must be of exceeding great usefulness in a country which does not yet enjoy the now usual advantages of an official national pharmacopœia. This condition of things is a state but very slightly appreciated by those who have never labored under that great disadvantage, which, very fortunately, this generation of physicians and pharmacists in the United States have escaped through the wisdom of their fathers, who framed our National Pharmacopœia early in this century. B. F. D.

— Advertisement from an English contemporary: "A medical student, whose means are exhausted, would like to meet with some one who would advance him the necessary sum to complete his studies, at a moderate rate of interest. If necessary, he would, as a guarantee, at once marry his creditor's daughter, or, if he prefers it, would give an undertaking to do so on passing his final examination."

— Lüer, the famous instrument maker of Paris, has recently died.

Medical and Surgical Journal.

THURSDAY, MARCH 29, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number: $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

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No. 4 PARK STREET, BOSTON, MASS.

THE WATER SUPPLY OF NEW YORK CITY.

THE committee of five citizens appointed by Mayor Edson, at the request of the State Senate, to act with him in examining the water supply of New York City, and to report upon the practicability of the plan for a new aqueduct prepared by the Department of Public Works, have transmitted the report of their labors to the Legislature. It states that the health, security, and growth of the metropolis require an increased supply of water, and that the Legislature should immediately enact such measures as will enable the city to give this supply. The committee find that the Croton water-shed is the best source from which to obtain the increased supply of water, and the report goes on to say that a new aqueduct is necessary, and that the cost of its construction should not exceed $500,000 per mile. In regard to the storage of water, the committee examined two plans, one for a large reservoir with a dam at Quaker Bridge, with a capacity of 32,000,000 gallons, and the other for smaller reservoirs along the Croton River and its branches. The committee are divided in opinion as to which of these plans should be adopted, and a recommendation is made that they be referred to an unprejudiced commission. From the evidence before them they say there can be no question that there is a great waste of Croton water in the city, and they recommend that all necessary powers be given to the Department of Public Works to prevent all reckless and unnecessary waste of water until an increased supply is secured, and that this department be directed to use such powers effectively to this end. In conclusion the committee express the earnest hope that the work of increasing the water supply, if decided upon, shall be done by a commission selected from the best citizens, and that it may be done — as the existing Croton aqueduct and other works connected therewith were constructed — in a manner to reflect credit upon the city, and honor upon those having charge of the work.

On the 20th of March Senator Daly, of New York, introduced into the State Senate a bill providing for a new aqueduct, according to which the Mayor, Comptroller, the President of the Department of Taxes, the President of the Board of Aldermen, the Commissioner of Public Works, and two persons to be appointed by the Mayor are to constitute the Aqueduct Commission. The Commissioner of Public Works is required to submit to them plans and estimates which they are authorized to approve or reject in whole or part (in case of rejection new plans are to be submitted), and the work is to be done by contracts made at public letting. In introducing this bill Mr. Daly stated that it emanated from the corporation counsel, and, in the main, had been inspired by the highest officials of the city, but that he did not indorse it in its entirety. "Judged by the history of the recent past," he said, "commissioners to supervise the construction of great public works have proved failures, as instanced by the Brooklyn bridge, the New York court house, and the new capitol at Albany, but the people insist that in whatever form the measure may finally pass, the building of the new aqueduct must be taken outside the dominion of politics, and the work prosecuted to a completion on purely business principles. It is worthy of note that while unanimous in their demand for a new aqueduct and an independent commission, neither the metropolitan press nor Mayor Edson's committee venture a suggestion as to how that commission should be appointed."

SCHOOL HYGIENE. PROVISION THEREFOR IN OHIO.

WE are glad to learn that after some patient effort on the part of those favoring a sanitary inspection of schools in Ohio, certain legislation has been obtained from the General Assembly for such an object. By an amendment lately made to Section 2135 of the revised statutes of that State, local boards of health are required to inspect semi-annually, and oftener if in their judgment it shall be deemed necessary, the sanitary condition of all schools within the limits of the town corporation. The law is a general one, applying to the whole State and to all schools whether public, private, or parochial. How far such sanitary inspection means medical inspection depends, we suppose, somewhat upon the composition of individual local boards. The law as passed is less explicit than that originally desired by the friends of the movement, but seems to be at least a step in the right direction.

We have several times expressed our views at some length in regard to the importance of medical inspection of schools, especially of public schools, and are content at present to record progress in this direction wherever we note it, whether at home or abroad. Unfortunately we have as yet nothing to record in regard to our own immediate neighborhood.

In the *London Lancet* (March 10, 1883.) we notice it is reported that in France, since 1878, several municipalities have appointed medical inspectors for their schools; in 1879 the Council General of the Department of the Seine decided that the schools of the entire district should be placed under regular medical supervision. For this purpose it has been necessary to appoint 114 medical inspectors, to each of whom a pitiful salary of $120 was voted, a sum pitiful even for France. Though paid but little, much is expected of these functionaries. They must be fully qualified practitioners; must visit all the schools in their locality twice a week; see to the drainage, lighting, warming,

and ventilation of the buildings; report on the health of any of the pupils who show signs of indisposition; give warning in cases likely to prove contagious; insist on the removal of fever patients; give advice as to disinfecting, etc., etc.

At Lyons, a city not far from the size of Boston, the authorities have managed the matter better and more seriously. They have selected by competition eight medical school inspectors, at salaries of $300 per annum. The appointment lasts for six years, and the inspectors can neither be removed nor reëlected; the latter rule being enacted for the purpose of introducing every year two new inspectors, so that the most modern ideas respecting practical hygiene may constantly make themselves felt in the schools.

One of the principal results as yet attained in France by these measures is said to be the improved physical training of the children.

A FLIMSY SUIT FOR MALPRACTICE.

A SUIT for malpractice brought against Dr. George C. McClean, of Springfield, Mass., and apparently fomented by lawyers on the "shares principle," has recently come to naught in a way which increases one's respect for the common sense of the presiding judge if not for the moral standard and sagacity of the plaintiff's counsel.

Nearly five years ago a girl, then seven years of age, and poorly nourished, suffered a comminuted fracture of the lower end of the humerus; there were three fragments, the condyles forming each one, and a triangular section of the lower end of the shaft a third. The arm was put up carefully under ether with the usual elbow splint. The result was an arm perfect in all its motions and nutrition, the case against Dr. McClean resting on the fact that the forearm when extended is in nearly a straight line with the upper arm instead of curving outward somewhat as natural. The counsel for the plaintiff put in their case, and then called the defendant upon the stand. As soon as the defendant's evidence was given the judge summarily stopped the proceedings, not caring to hear the expert testimony, which was in readiness, and charged the jury that under the law it was his duty to instruct them that the plaintiff's case had not been maintained, and that they should render a verdict for the defense, which they did without leaving their seats.

Now the bringing of such a flimsy suit as this combines, in our estimation, folly and wickedness in about equal proportions, and not only illustrates to what shifts men, by no means in the lowest walks of life, are at times put to make a living, but also indicates, what we already know too well to be a fact, that members of our profession are at times, and that by no means seldom, successfully victimized in cases scarcely less hopeless in justice than the one just related. As long as there are "shysters" at the bar medical men will probably be subjected to the expense and annoyance of defending such suits, though every such decision as that above reported discourages their renewal. This must be expected, for such men earn their living as best they may, but we must confess to having been at times surprised at seeing weakly supported malpractice suits undertaken by lawyers from whose social and professional position a higher standard might have been anticipated.

To support the suit against Dr. McClean we are informed that the counsel for the plaintiff was unable to obtain any medical testimony whatsoever.

ANTHROPOMETRY IN THE ARMY.

ANOTHER evidence of the general desire, shown in so many ways, to make the work of the Medical Department of the Army of the United States contribute to the advancement of sound learning has recently been given and deserves a brief mention. In a circular from the War Department the Surgeon-General expresses his desire that the medical staff shall make as complete records as possible of all post-mortem examinations, and to aid in securing uniformity he includes in the circular the report made by Dr. H. P. Bowditch as chairman of a committee to the Medico-Legal Society of Massachusetts, and published in the JOURNAL of October 19, 1882. This report of Professor Bowditch calls attention to the various problems to be settled by autopsies and the data which it is desirable to collect, and gives a table for use in recording observations.

The circular also includes tables of weights of the various organs of the human body, the calibre of arteries, heights and weights, etc., which will show with very little study the object to be accomplished, and give the observer the advantage of comparison with the average results of many previous records.

It is somewhat curious in these days when scientific men are, in general, anxious to introduce the decimal system of weights and measures, to see Professor Beneke's statistics reduced from metric to the ordinary notation.

We trust it will be a source of pleasure to every medical officer to feel that it is in his power to make some slight contribution to our general stock of knowledge, and that the wishes of Surgeon-General Crane will meet with a hearty response.

MEDICAL NOTES.

— Dr. William H. Van Buren of New York died on Sunday last at the age of sixty-four.

— The leading members of the medical profession of New York will give a complimentary dinner to Dr. Oliver Wendell Holmes, at Delmonico's, on Thursday evening, April 12th. It is tendered as an expression of the appreciation of the honor Dr. Holmes has won for American medical and general literature during the past forty years.

— A decision has recently been made on appeal in the Queen's Bench Division of the High Court of Jus-

tice, England, that a liquor known as Summer's Botanic Beer, which contained by analysis 5.80 per cent. of proof spirit, is not "beer" within the meaning of the Internal Revenue Act. The charge was of selling beer without a license, and the respondent proved that the article in question was manufactured from water, dried herbs, and sugar, but neither malt nor hops. The court decided that these latter ingredients were essential to "beer."

— Dr. Goëtan Delaunay has communicated an interesting paper to the French Anthropological Society, in which he seeks to establish that right-handedness is not an acquired habit, but is a natural attribute characteristic of the superior races. Savage tribes, he states, and communities in an inferior state of civilization, show a much larger proportion of left-handedness than highly civilized peoples do. Idiots and epileptics offer a very large percentage of left-handed individuals, and there are more left-handed women than men. His general conclusion is that in the evolution of the species there has been a steady tendency to the development of the right side of the body at the expense of the other, and that the examples of left-handedness still to be met with in the superior races are mere "survivals."

NEW YORK.

— An association for the purpose of upholding the old code of medical ethics, and resisting any modification of this code that does not emanate from the body in which it originated, has been formed, and held its first regular meeting at the hall of the Academy of Medicine on Friday evening, March 23d. Among those interested in the movement are such leading men as Austin Flint, Sr., Austin Flint, Jr., T. Gaillard Thomas, Alonzo Clark, Willard Parker, Thomas M. Markoe, Lewis A. Sayre, Frank H. Hamilton, Isaac E. Taylor, William T. Lusk, Samuel S. Purple, Abram Du Bois, J. W. S. Gouley, John H. Hinton, Stephen Smith, J. Lewis Smith, Jared Linsly, Nathan Bozeman, Henry D. Noyes, Richard H. Derby, F. D. Weisse, J. Williston Wright, Octavius A. White, John G. Adams, and William J. Morton.

— The Board of Health has now assumed the duties imposed upon it by the act to prevent baby farming, which has recently become a law of the State, and which places the matter of issuing licenses in its hands; and Mr. Elbridge T. Gerry, president of the Society for the Prevention of Cruelty to Children, at the instance of which the act was passed, has written to President Chandler to request in its behalf that the Board before granting any applications for licenses should advise the Society, in order that proper information in regard to the parties so applying may be furnished. He also expresses the willingness of the Society to coöperate with the Board of Health in the enforcement of the law when any violations of the licenses granted may occur.

— The fifty-third annual commencement of the College of Pharmacy of the City of New York was held at Steinway Hall, March 20th. The address to the graduates, who were sixty in number, was made by Mr. Ewen McIntyre, the president of the college, and the valedictory address was delivered by Mr. Alfred Stores. Gold, silver, and bronze medals were awarded for proficiency by Mr. George Inness, president of the Alumni Association.

— The Woman's Christian Temperance Home, in East Fifty-Seventh Street, the institution recently founded by the late William E. Dodge, has just been opened with appropriate exercises. It is intended for the benefit of women of the better class who have become addicted to the use of alcoholic liquors or narcotics, and will accommodate about twenty patients. Mrs. William E. Dodge is the president of the Association, under whose auspices it has been established, and Dr. A. P. Meybert is the physician in charge.

— A conference was recently held at St. Luke's Hospital, between the officers of the Hospital Saturday and Sunday Association and the pastors and other officers of representative city churches, to determine on the most efficient steps to be taken for bringing all the churches of the city to take part in the annual collection made on the last Sunday in December for the benefit of the hospitals, and it was agreed that communications should be personally addressed to the clergy of all denominations in the city to ascertain their interest in the purposes of the Association, and to ask them to take such measures as may be necessary to secure collections from their several congregations on the next Hospital Sunday.

— Suit having been brought against Dr. John Westbay, a dentist, for $5000 damages for personal injuries received by a lady patient while he was drawing a tooth, the jury awarded her $1200, and an extra allowance of five per cent. During the trial Drs. Alfred Little and C. F. Westbrow testified that the plaintiff's jaw was broken in the operation.

— Several weeks ago the Brooklyn Board of Health sent a report to the Board of Education that public school No. 15, on Third Avenue, was in a bad sanitary condition, and recommending the erection of a new building. The lower floors especially were shown to be insufficiently lighted and ventilated, while the atmosphere was poisoned by foul odors from the closets in the yard, and, on account of the number of scholars, only one sixth the proper amount of space was allowed to each child. As far as known, no attention has as yet been paid to the report by the Board of Education, and some of the teachers are becoming indignant at their negligence, since the health authorities have expressed the opinion that unless a change is made sickness must inevitably result. A number of the pupils, it is stated, have already been obliged to withdraw from the school in consequence of the effect of the insufficient light upon their eyes.

— A resident of DeKalb Avenue, Brooklyn, has brought suit to recover $10,000 damages from the city for the loss of his two sons, aged eleven and six years, whose death, he claims, was caused by drinking the impure water of a well near his house. He claims that the city authorities, knowing the well to be "poisonous, unclean, and dangerous to human life and health," neglected to clean and repair it, or give the

public notice of its condition. The officers of the health department in their examination of the old wells have discovered that the water in most of them is injurious, and thirty have already been closed by order of the Common Council.

— Dr. C. H. King, for a number of years the popular physician-in-chief of the Sailors' Snug Harbor, on Staten Island, is dead, and at his funeral on the 21st, much feeling was shown among the five hundred old men who comprise the inmates of the institution.

PHILADELPHIA.

— By invitation of the Mütter Museum Committee of the College of Physicians, Dr. W. T. Belfield, of Chicago, gave a very interesting lecture and demonstration of various bacteria, Actinomyces Bevis, Filaria Sanguinis Hominis, etc., on March 20th at the Hall of the College, which was well attended.

— Dr. William W. White, lecturer at the University of Pennsylvania, has been invited by Mayor King to deliver a short course of lectures to the police force upon the management of accidents, first aid to render in emergencies, the early treatment of wounds, etc. The men will be sent in several detachments, to each of which the course will be repeated with demonstrations. This is a considerate and humane example which deserves to be followed in every large city; it will probably result in great benefit to the public, and doubtless will save life.

— Some interesting surgical cases of recent occurrence deserve mention. In a case of an old lady suffering intense neuralgic pain in the course of senile gangrene of the foot, involving the heel and plantar surface, where morphia interfered with digestion, and gave only transitory amelioration. Dr. Morton divided the sciatic nerve near the hip with perfect success; the patient was at once relieved from pain, and is able once more to eat and sleep without being tortured with neuralgia. He was led to divide the sciatic nerve because in previous operations where he had divided the sciatic for elephantiasis Arabum he had found anæsthesia in this part of the foot to follow division of this nerve trunk; in several similar cases of neuralgic pain in the foot he had previously divided the nerves in the leg; to do this, however, required several incisions, and he believed that the result was less successful than it would be if the operation were performed upon the main trunk. The result in this case certainly justified this opinion, and it is worthy of remark that the course of the gangrene was not apparently affected, at least not adversely, by the nerve section. This case was reported at the last meeting of the Philadelphia Academy of Surgery.

Another very interesting case with an unusual, if not unique, operation will be presented at the next meeting of the Academy of Surgery by Dr. Mears. A young lady presented herself two months ago with ectropion of the left eye, the lower lid being kept permanently everted by a large cicatrix on the right cheek; there was also loss of the malar bone and part of the superior maxilla. The jaws could not be separated on account of a strong fibro-cartilaginous, partly ossified bridge of cicatricial tissue, uniting the upper jaw on the left side to the horizontal ramus of the lower jaw. This condition had resulted from a gunshot wound, eighteen years before, when she was a child two years of age. The teeth had been prevented from developing except a few on the right side, which grew outwards. The accidental discharge of a gun in the hands of a play-fellow had sent a charge of shot into the left side of the face; the wound was so severe that the physician who was called in pronounced it mortal, and said that he could do nothing for the patient. The parents cleaned the wound as well as they could, checked the hæmorrhage by pressure, and saved the child's life, but with the result above stated. The patient could speak well enough, but could only swallow soft food; the front teeth, she stated, had been worn away by rubbing articles of food against them in trying to get them into her mouth. Dr. Mears relieved the ectropion by a plastic operation; he then extended his incision from the centre of the cheek, above Steno's duct, directly outward, on the level of the tragus of the ear, so as to expose the articulation. He next cut through the ascending ramus of the lower maxilla, just below the coronoid process, and disarticulated and removed the upper fragment; the wound was then closed by interrupted sutures. He also cut through the band of union in the mouth so as to liberate the jaw, and he extracted twenty-two rudimentary and defective teeth and roots. The patient made a good recovery. She can completely close the eye, and her appearance is immensely improved. She can also open the mouth an inch or more, and has good motion in the false joint. She will be fitted with an artificial denture, and will be able to support herself teaching school, as she has had a good education.

— A less successful operation, also of recent occurrence, deserves to be recorded. It is said that one of our prominent surgeons, intending to operate by Bigelow's method for lithotrity, injected some water into the bladder of the patient, a man of middle age. Unfortunately, the bladder was so weak that it was ruptured by the distending force; the operation was not performed, and the patient died within forty-eight hours. An autopsy demonstrated the accident, and showed the diseased condition of the bladder.

— The experiment of keeping the library of the College of Physicians open in the evening having now been tried for three months, it has been so poorly patronized that it is believed that the committee will recommend a return to the former plan, and extend the hours for the day in place of the evening.

— Dr. S. Weir Mitchell has presented five thousand dollars to the College of Physicians as the nucleus of an entertainment fund, the income of which is to be devoted to an annual dinner, or in any other way preferred by the college, in order to promote sociability.

— Dr. W. S. Forbes, demonstrator of anatomy, was acquitted of complicity with the resurrectionists recently found guilty of robbing Lebanon Cemetery, a graveyard in the southern part of the city belonging to colored people.

Correspondence.

LETTER FROM WASHINGTON.

March, 1883.

MR. EDITOR, — This being the season for recruiting the ranks of the profession throughout the country, Washington will contribute her modest quota. The medical colleges seem to have done well here this winter; the Medical Department of the Columbian University, out of a class of seventy-two, has ten graduates. How insignificant these numbers must seem, and what smiles they must call forth from college men in our large cities! They may well ask, How have these young men been fitted for their profession? what clinical advantages have they had? what practical work have they done? Their clinical advantages have been but meagre, some few have done hospital and dispensary work, but they have had none of those great advantages of large hospitals in commercial cities, with the privilege of standing on tiptoe around the outskirts of a crowd of pushing students, and an occasional glimpse at the head of the clinical professor, and they have no intimacies with members of house staffs to whisper in their ears what bed the professor will pass to next, and enable them to take up their position in advance in the inner ranks, and thus at least hear something of what he is saying; but they are prepared to take advantage of the post-graduate courses now being established in our large cities, to perfect themselves in physical diagnosis by such means, and to compete successfully for hospital positions, as their record has shown in the past. Such schools as these must always be useful in furnishing this material; every one of these men has been well in hand (to use a turfy expression) by his Faculty, throughout his course; he has not been simply classed in the mass, but has been individualized; he has been put to a certain amount of practical work; he has been trained in the proper sense of the word; his capacity has been tested, and he has not been graduated simply on a cram, but because he was prepared for it. In so small a school, pecuniary consideration being almost *nil*, reputation becomes paramount.

Dr. Hamilton, the Surgeon-General of the Marine Hospital Service, has done good work in this College during the winter, which has been highly appreciated. He has taken the chair of Surgery in the absence of Dr. J. Ford Thompson, who has spent the winter abroad. The Columbian University has at last come into town, and is now erecting handsome and spacious buildings, which will be quite accessible and in marked contrast to the old site, which was only reached after a long walk or drive. It is contemplated by the University authorities to institute a scientific course, with all the appliances necessary to make it practical. This has become a necessity here, — the workings of the National Museum and Smithsonian Institution, the multiplication of scientific societies, and the great and yearly increase of scientific men in our midst, call loudly for an elementary and advanced course in scientific subjects, with an opportunity to pursue original work.

The Garfield Hospital, although not very demonstrative just now, is quietly pushing its way along to an assured position. The last step taken by its Trustees has been to select a site for the buildings, just out of town, in an accessible and healthy position. This site for the hospital buildings proper, and a small building in town for accident and emergency cases, would soon make it a practical working institution. There has been established in this city, for some years, quietly and doing good work, an accident hospital, which, by proper recognition of the managers and staff, could readily be merged into the Garfield Hospital, and serve the purpose. Those who have charge of it certainly deserve such recognition.

After persistent and well directed efforts of some three years, we have at last established a Nurses' Home and Directory, in a comfortable house and accessible neighborhood, — thanks to the women, — for they almost alone have made it a success; they made it fashionable, and that tells the story nowadays. Now it remains to be seen whether the profession and the public will support it.

The Forty-Seventh Congress, like its predecessors, has kept the friends of the National Board of Health and of the National Medical Library on the *qui vive* to see that their interests were properly represented in the necessary appropriations. This necessity for constantly watching bills put through Congress cannot inspire any very enthusiastic or elevated feelings, and must be very repugnant at times to men of a sensitive temperament; yet it must be done, and members of Congress must be button-holed, and, as the average Congressman cannot weigh other matters, his political interests at home have to be so manipulated as to bring their pressure to bear upon him. Anything but a pleasant occupation for the scientific and literary men of to-day!

In January there was an attempt made in the House of Representatives to increase the number of contract surgeons in the United States Army from 50 to 100, which was not agreed to, but Mr. Upson, of Texas, made a speech in favor of this increase, in which he embodied a very useful list of contract surgeons and where employed, with a supplementary list of military posts where two or more medical officers are on duty. It seems there are 114 contract surgeons now employed in the United States Army. Many of them, as the Surgeon-General says in his letter, having been employed for years, are very efficient in the discharge of their duties, and of value to the service, in addition to the 138 regularly commissioned surgeons, on account of the number of isolated posts, military scouts and expeditions, and the large force at some of the posts being too great for the proper attention of one medical officer alone. The opposition simply made the plea of the necessity for economy, except in the case of Mr. Robinson, of New York, who made one of his characteristic speeches, and seemed to be irritated by the comparison with the English army, paragraphically referred to by Mr. Upson in his speech; this also gave him an opportunity to inveigh against liveries in some vague way commenting upon the uniform of the army officer.

On February 21st the Senate increased the number of contract surgeons to eighty, which, in the final conference, was reduced to seventy-five, and so passed. Mr. Logan, of Illinois, offered an amendment to abolish the office of Assistant Surgeon-General, but it was ruled out of order. Mr. Logan said that the office was absolutely without any reason, and that its abolition would save the government $4000 a year. He also referred to some man who had written to a Senator that he was willing to reduce his rank from a colonelcy, which he had held for six years, to a colonelcy to commence now, without any pay, in order to secure the position.

The President has since appointed, with the confirmation of the Senate, Dr. Robert Murray as Assistant Surgeon-General. Dr. Murray entered the service in 1846, and was appointed from Maryland. He stood next on the list in regular order, after Dr. Baxter.

The National Medical Museum and Library on January 4th received its annual appropriation of $10,000 in the House, but on February 21st there was an attempt to reduce it to $5000 in the Senate. Mr. Harrison, of Indiana, expressed the idea that the books purchased were all circulated from post to post. Mr. Logan, of Illinois, objected for one reason that only $5000 was used for the purchase of books; the remainder of the appropriation went for the sustaining of the museum, repairs of building, and pay of employees; that the repairs should properly come to the Quartermaster's Department. During the discussion official statements were read which showed that the library was now in receipt of current medical journals and transactions to the number of 760 and at a cost of $2500, and that during the past year books had been loaned to Boston, New York, Philadelphia, Baltimore, Chicago, Cincinnati, St. Louis, and other cities. Mr. Logan seemed to be irritated that he could not get more personal information; he did not think these books should be sent about in this way, and not sent to army surgeons, and therefore that they should not be sent out at all; that physicians should come to the library itself to consult them. The amendment as finally passed by the Senate read $3000 for the museum and $7000 for the library, the latter amount being about $500 less than was shown to have been expended for the purpose during the past year. This was modified in conference to simply appropriate $10,000.

The appropriation for the National Board of Health occasioned quite a stirring debate in both houses. In the House, on February 20th, when it was proposed that $100,000 of the funds in the hands of the President to be used in preventing and suppressing the spread of epidemics, and maintaining quarantine, should be expended under the supervision of the Board, Mr. Ellis, of Louisiana, opposed this mode of supervision most vigorously, and criticised particularly the way in which money had already been expended on essays for special subjects. He indulged in a flight of fancy which was filled with adjectives, and which pictured the angel of pestilence hovering over the Southern coast, etc., while the National Board of Health was gathered about a table "inspecting a certain kind of water under the skin of a rabbit, just to see how the rabbit will like it, and how the health of the rabbi will be affected by it." The old charge was reiterated of the attempt of the Board to create the belief that yellow fever prevailed in New Orleans at a time when that city was in perfect health. Mr. Dunn, of Arkansas, responded by saying, among other things, "The people believe that your (Louisiana) State Board of Health, serving the commerce of New Orleans, is willing to peddle death to this country in order to keep up its commerce, and it has done it." "They believe in the conservatism of the National Board of Health, which cannot be brought under the influence of the commerce of New Orleans or of any other city."

Mr. Manning, of Mississippi, thought it would not be very well if there was a critical inquiry into the conduct of the State Board of Health of Louisiana, and that there were several prominent physicians in New Orleans who did not sympathize with the views of Mr. Ellis. He further took up the charges as made by Mr. Ellis, and showed that twenty-seven (instead of nine as stated) vessels were cared for at Ship Island during the past year. Mr. King, of Louisiana, also considered the work done by the Board in the way of special investigations, and gave them a very favorable and complimentary review.

Mr. Hiscock, of New York, accused the Board of attempting to create a panic for the purpose of securing patronage and power, and favored the Marine Hospital Service to supervise the expenditure of this fund. No vote was reached, but the question came up in the Senate March 2d, when an appropriation for the current expenses of the Board was passed, with $10,000 for miscellaneous investigations, but the Senate refused to allow them the use of the $100,000 unexpended balance. It was stated that the existence of the Board expired June 2, 1883, but Mr. Harris, of Tennessee, explained that there was no limitation as to the existence of the Board, only the act giving additional powers expired at the time named, although this act gave it the most material of its powers. Mr. Harris continued by reviewing the valuable work done by the Board, and stated that the rules and regulations adopted by it had not only greatly increased the security of the whole Mississippi Valley from the importation of contagion from foreign countries, and from one State into another, but had also given a degree of confidence never enjoyed when relying upon State and local boards, as every one of these was in sympathy with their respective local commercial interests. There was but one State or local board, that of Louisiana, but what has recommended the sustaining and continuing of the National Board of Health. The Louisiana Board and the organization known as the Marine Hospital Service have continuously sought to destroy the National Board of Health, their motives not being prejudicial to the Board, but showing a disposition on the part of these organizations to aggrandize themselves. Mr. Lamar, of Mississippi, and Mr. Garland, of Arkansas, heartily indorsed these statements. The final conference committee appropriated $10,000 to meet the necessary expenses alone.

The subject of color-blindness came up in the House on February 26th, through an attempt made by Mr. Harris, of Massachusetts, to establish a definite and uniform standard of examinations for color-blindness and tests for visual acuteness in persons employed in the United States Navy and in the merchant marine by the appointment of three persons, one as an expert, one line and one medical officer of the United States Navy, to represent the United States in any international congress or convention for this purpose, and to establish standards for colors for signals used at sea. Mr. Harris stated that Sweden was ready to join in organizing such a commission, and that the English government had the subject under consideration. The introduction of the subject was objected to, and it was therefore not considered.

The discussion on the tariff, although lengthy in both houses, presented little of medical interest. It was amusing to note how the minds of our statesmen endeavored to grapple with the subject of the polariscope as a test for sugar, and Senator Morgan, of Alabama, in dealing with glucose evidently considered it simply as sulphuric acid made pasty by the addition of some starchy substance.

EMERGENCY LECTURES.

MR. EDITOR, — At the request of a committee of young men representing one of the larger associations of this city, it is proposed to deliver a course of public lectures on the management of singultus, delirium tremens, alcoholic coma, orchitis, adenitis, cystitis, retention, and catheterization; in short, all the more masculine "emergencies," in which our youth undergo untold agonies long before they can get round to the family physician.

Although this course will be for "gentlemen only," its scope will be somewhat different from that of the lectures delivered by a noted specialist a short time since "at the request of many of our leading physicians," and it is intended to supplement the "emergency" course so happily conceived to supply "the wants of mothers and ladies generally."

These lectures will also be illustrated by models and the stereopticon. The proceeds will be devoted to a charitable object, and the names of the lecturers will be published next week. PROGRESS.

TRANSFUSION IN GAS-POISONING.

March 13, 1883.

MR. EDITOR, — In your issue of March 1st is found a paragraph stating that "Dr. F. C. Valentine recently performed transfusion of blood in a case of partial asphyxia by illuminating gas."

I of course do not know if Dr. Valentine has performed such an operation in another case, but since this operation is rare, it is extremely unlikely that it should be performed about the same time, in the same city, in the same disease, by two different physicians. It may therefore be taken for granted that the case referred to is the one in which I as well as Dr. J. Anderson were called in consultation by Dr. Valentine. It was I who suggested the performance of venesection and transfusion of fresh blood, and who, assisted by the other two gentlemen, performed it, with an apparatus constructed by myself, and described in the Transactions of the New York Obstetrical Society.[1]

By some strange mistake all the papers of the city attributed the operation the next day to Dr. Valentine. That is of very little consequence; but since I take this to be the best piece of work I ever did in the exercise of my profession, it is a little hard to see it attributed to another by one of the most important medical papers in the country.

When I reported the case [2] I was not aware that transfusion had been used before in cases of this kind. Since then I have found that several successful cases are recorded.[3] If thus I have not the honor of having originated this treatment for gas-poisoning, I certainly think that it is little known and less used in this country. In the same number of your journal in which my case is referred to is found another reported by Dr. A. L. Mason, which ended fatally. He refers to a case described by Dr. F. W. Draper, which had the same result. In this city a case has occurred since mine, and that, too, ended in death. I think, therefore, that in all serious cases transfusion, by which patients have been rescued in the most desperate conditions, ought to be tried.

Very respectfully yours,

H. J. GARRIGUES, M. D.,
Obstetric Surgeon to Maternity Hospital.

[1] American Journal of Obstetrics, 1878, page 754.
[2] See New York Medical Journal, March 3d.
[3] Ziemssen's Encyclopædia, vol. xvii., p. 472, and other places.

Miscellany.

EARACHE IN MEASLES.

AT a meeting of the Clinical Society of Maryland (*Maryland Medical Journal*, March 1st) Dr. Theobald reported a case of earache occurring in measles in which laudanum and sweet oil having been instilled without effect, he had been called in after some hours of suffering. On examination the drum membrane was found deeply injected. A four-grain solution of atropia was ordered to be instilled into the ears, four times a day in one, twice a day in the other. In a half hour after the first instillation the pain was entirely relieved, and there was none subsequently sufficient to make him cry. The following day the congestion was much diminished, and in three days the redness had entirely disappeared. But for the treatment pursued in this case, Dr. Theobald believed that the case would have eventuated in suppurative otitis with its resulting long-continued discharge. The treatment is applicable to scarlatinal otitis as well as that due to measles. If treated early, it was believed that these cases could be always aborted. They rarely come under the care of the specialist in this stage. Dr. Theobald had kept up the instillations three or four times a day for six or eight days, without the development of constitutional effects. Should rupture of the drum occur greater caution is required, but it is not necessary to discontinue the treatment entirely even then.

REMARKABLE CASE OF DEFECTIVE DEVELOPMENT.

A CASE was recently exhibited before the Philadelphia County Medical Society by Dr. Atkinson (*Medical Times*, February 24th) which presented the following peculiarities: It was a man aged forty years, who has never had teeth, nor any distinct growth of hair on the scalp, except the downy hairs such as are seen in early infancy. He is also destitute of the sense of smell, and almost of that of taste. His skin appears to be unprovided with sweat glands, as he never perspires, and when working actively he is obliged to wet his clothes in order to moderate the body-heat. He can sleep in these wet clothes in a damp cellar without catching cold. His jaws present the appearance seen in persons who have lost all their teeth. Hair is present in the axillary and pubic regions, but the downy hair which is usually seen over the skin at large is wanting, except on the scalp. His maternal grandmother and uncle were similarly defective, and the present patient is among the younger of twenty-one children. He is a man of very good health, having never been seriously sick, and, although not able to chew his food in the ordinary manner, he has never suffered from dyspepsia. The secretion of urine is unusually abundant. He is married, and has eight children, among whom are two girls, both of whom lack a number of teeth.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 17, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	739	272	18.77	22.29	5.27	3.81	.14
Philadelphia	846,984	400	106	16.00	8.25	9.25	.50	1.01
Brooklyn	566,689	281	95	20.65	21 00	6.76	1.68	—
Chicago	503,304	190	88	19.46	13.13	8.42	2.63	—
Boston	362,535	193	41	11.22	22.95	3.06	.51	—
St. Louis	350,522	137	57	24.82	13.14	6.57	3.11	—
Baltimore	332,190	199	76	19.00	9.00	9.00	5.00	5.53
Cincinnati	255,708	155	62	21.96	20.67	3.23	7.11	—
New Orleans	216,140	172	27	42.99	1.74	1.16	—	32.50
District of Columbia	177,638	103	30	11.65	8.74	1.94	5.83	—
Pittsburg (1883)	175,000	69	21	23.18	13.04	7.25	2.90	1.96
Buffalo	155,137	51	23	25.48	9.80	7 84	7 84	—
Milwaukee	115,578	49	23	18.36	10.20	6.12	2.04	—
Providence (1883)	116,755	49	14	8.16	14.28	4.08	—	—
New Haven (1883)	73,000	24	11	20.80	16.64	4.16	—	—
Charleston	49,999	22	5	—	—	—	—	—
Nashville	43,461	16	5	6.25	12.50	—	—	6.25
Lowell	59,485	25	5	16.00	20.00	—	—	—
Worcester	58,295	26	11	11.54	23.08	11.54	—	—
Cambridge	52,740	19	7	10.52	15.78	5.26	—	—
Fall River	49,006	30	14	33.33	66.66	33.33	—	—
Lawrence	39,178	10	4	10.00	20.00	—	—	—
Lynn	38,284	14	3	—	28.57	—	—	—
Springfield	33,340	16	3	18.75	25.00	—	—	—
Salem	27,598	8	0	12.50	—	—	12.50	—
New Bedford	26,875	9	3	—	11.11	—	—	—
Somerville	24,985	6	3	33.33	13.33	—	—	—
Holyoke	21,851	8	5	25.00	37.50	12.50	—	—
Chelsea	21,785	12	4	41.66	16.66	24.99	—	—
Taunton	21,213	10	3	10.00	—	—	—	—
Gloucester	19,329	6	3	13.33	—	—	—	—
Haverhill	18,475	2	0	—	—	—	—	—
Newton	16,995	2	0	50.00	50.00	—	—	—
Brockton	13,608	2	0	—	50.00	—	—	—
Newburyport	13,537	6	3	—	13.33	—	—	—
Fitchburg	12,405	5	1	—	20.00	—	—	—
Malden	12,017	12	2	16.66	8.33	—	—	—
Twenty-three Massachusetts towns.	180,241	72	20	14.29	12.51	2.79	5.56	—

Deaths reported 3149: under five years of age 1050: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 579, lung diseases 496, consumption 482, diphtheria and croup 179, scarlet fever 101, small-pox 76, typhoid fever 50, whooping-cough 43, diarrhœal diseases 37, malarial fever 30, measles 27, cerebro-spinal meningitis 26, erysipelas 24, puerperal fever 16. From *typhoid fever*, Philadelphia 11, St. Louis six, New York and Pittsburg five each, Chicago and Boston four each, Cincinnati and Buffalo three each, Baltimore and District of Columbia two each, Brooklyn, New Orleans, Lowell, Lawrence, and Gloucester one each. From *whooping-cough*, New York 11, Brooklyn and Cincinnati seven each, Chicago, Boston, Pittsburg, and New Haven three each, Philadelphia two, Baltimore, Milwaukee, Providence, and Lowell one each. From *diarrhœal diseases*, New York 11, Boston six, New Orleans five, Philadelphia three, Brooklyn, Chicago, Cincinnati, and District of Columbia two each, St. Louis, Baltimore, Buffalo, and Providence one each. From *malarial fevers*, New York and New Orleans nine each, Brooklyn six, St. Louis and Cincinnati two each, Philadelphia and Baltimore one each. From *measles*, New York 21, Philadelphia, Chicago, St. Louis, Baltimore, Quincy, and Peabody one each. From *cerebro-spinal meningitis*, St. Louis six, New York four, Springfield three, Lowell and Somerville two each, Chicago, Boston, Cincinnati, New Orleans, Pittsburg, Salem, Chelsea, Malden, and Chicopee one each. From *erysipelas*, New York seven, Brooklyn and Chicago, four each, Philadelphia and Cincinnati two each, Boston, St. Louis, Holyoke, Milford, and Brookline one each. From *puerperal fever*, Milwaukee four, New York three, Brooklyn two, Philadelphia, Chicago, St. Louis, Baltimore, Cincinnati, and New Haven one each.

Fifty-six cases of small-pox were reported in Baltimore, Buffalo five, Pittsburg one; diphtheria 27, scarlet fever 10, typhoid fever six, in Boston; scarlet fever 18, and diphtheria seven in Milwaukee.

In 43 cities and towns of Massachusetts, with an estimated population of 1,220,892 (estimated population of the State 1,922,530), the total death-rate for the week was 19.14 against 19 and 19.31, for the previous two weeks.

For the week ending March 3d, in 173 German cities and towns, with an estimated population of 8,737,203, the death-rate was 25.5. Deaths reported 4281: under five years of age 1850; consumption 701, lung diseases 547, diphtheria and croup 195, diarrhœal diseases 117, scarlet fever 77, whooping-cough 47, typhoid fever 38, measles and rötheln 31, small-pox (Heilbronn two, Königsberg one) three, typhus fever (Til-it two) two. The death-rates ranged from 14.8 in Mainz to 37.3 in Duisburg; Königsberg 23.2; Breslau 30.9; Munich 28.6; Dresden 24.9; Berlin 22.7; Leipzig 20.1; Hamburg 23.8; Cologne 26.6; Frankfort 18.4.

In the 28 great towns of England and Wales, with an estimated population of 8,620,975, for the week ending March 3d, the death-rate was 23. Deaths reported 3801: acute diseases of the respiratory organs (London) 388, whooping-cough 100, scarlet fever 69, fever 64, diarrhœa 41, measles 27, diphtheria 22, small-pox (London seven, Newcastle three, Birmingham one) 11. The death-rates ranged from 17.6 in Birkenhead to 33 in Cardiff; Brighton 20.6; London 21; Bolton 22.3; Birmingham 23.3; Sunderland 25; Manchester 26.5; Wolverhampton 28.9; Liverpool 30.1. In Edinburgh 19.9; Glasgow 29; Dublin 34.8.

For the week ending February 24th, in the Swiss towns, population 494,390, there were 38 deaths from consumption, lung diseases 37, diarrhœal diseases six, diphtheria and croup seven, erysipelas two, scarlet fever one, typhoid fever one. The death-rates were, at Geneva 25.6; Zurich 16; Basle 19.1; Berne 16.7.

For the week ending March 3d, in the Swiss towns, population 494,390, there were 47 deaths from lung diseases, consumption 45, diphtheria and croup 16, diarrhœal diseases 10, whooping-cough four, measles, scarlet fever, and typhoid fever one each. The death-rates were, at Geneva 12.3; Zurich 12; Basle 25.4; Berne 35.

The meteorological record for the week ending March 17th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
March, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 11	29.515	32	43	19	61	61	70	64	SW	W	W	18	22	15	C	F	C	—	—
Mon., 12	29.890	28	36	10	48	50	69	56	W	SW	SW	15	20	15	C	O	O	—	—
Tues., 13	29.905	33	40	29	71	51	66	63	SW	W	NW	10	8	6	O	O	C	—	—
Wed., 14	29.787	37	45	21	73	56	76	68	S	S	SW	6	12	14	C	F	F	—	—
Thurs., 15	29.506	41	58	29	77	35	67	60	SW	W	NW	11	19	12	F	C	O	—	—
Fri., 16	29.828	22	16	32	56	51	70	59	NW	W	W	17	17	9	C	C	C	—	—
Sat., 17	29.902	34	42	16	61	48	69	59	SE	SW	S	7	15	8	F	F	O	—	—
Means, the week.	29.476	32	40	22				61										1.55	—[2]

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening. [2] Too small to measure.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 16, 1883, TO MARCH 23, 1883.

MURRAY, ROBERT, colonel and assistant surgeon-general. Detailed as member of Army Retiring Board, to convene at the call of the president thereof, at Governor's Island, New York Harbor, for the examination of such officers as may be ordered before it. Paragraph 2, S. O. 62, A. G. O., March 16, 1883.

SUMMERS, JOHN E., lieutenant-colonel and surgeon. Detailed as member of Army Retiring Board to convene at the call of the president thereof, at Omaha, Nebraska, for the examination of such officers as may be ordered before it. Paragraph 9, S. O. 62, A. G. O., March 16, 1883.

BILL, JOSEPH H., major and surgeon. Detailed as member of Army Retiring Board to convene at the call of the president thereof, at Omaha, Nebraska, for the examination of such officers as may be ordered before it. Paragraph 9, S. O. 62, A. G. O., March 16, 1883.

IRWIN, B. J. D., major and surgeon. Detailed as member of General Court Martial to meet at Whipple Barracks, Prescott, Arizona Territory, April 23, 1883, for trial of Captain J. P. Walker, Third Cavalry. Paragraph 1, S. O. 62, A. G. O., March 6, 1883.

JANEWAY, JOHN H., major and surgeon. Detailed as member of Army Retiring Board to convene at Governor's Island, New York Harbor, for the examination of such officers as may be ordered before it. Paragraph 2, S. O. 62, A. G. O., March 16, 1883.

BURTON, HENRY G., captain and assistant surgeon. To be relieved from duty in the Department of the East, and will report in person to the commanding general, Department of Dakota, for assignment to duty. Paragraph 1, S. O. 67, A. G. O., March 22, 1883.

GIRARD, JOSEPH B., captain and assistant surgeon. Detailed as member of General Court Martial to meet at Whipple Barracks, Prescott, Arizona Territory, April 23, 1883, for trial of Captain J P. Walker, Third Cavalry. Paragraph 1, S. O. 62, A. G. O., March 16, 1883.

PORTER, JOSEPH Y., captain and assistant surgeon. To be relieved from duty in the Department of the South, and will report in person to the commanding general, Department of Texas, for assignment to duty. Paragraph 1, S. O. 67, A. G. O., March 22, 1883.

WINNE, CHARLES K., captain and assistant surgeon. Granted leave of absence for three months from March 31, 1883, and will be relieved from duty in the Department of the East, and upon the expiration of his leave of absence will report in person to the commanding general, Department of California, for assignment to duty. S. O. 61, A. G. O., March 15, 1883.

TAYLOR, B. D., captain and assistant surgeon. To be relieved from duty at Fort Ringgold, Texas, and will, so soon as able, report to the commanding officer, Fort Clark, Texas, for duty. Paragraph 6, S. O. 25, Department of Texas, March 9, 1883.

BRECHEMIN, LOUIS, first lieutenant and assistant surgeon. To proceed to Fort Brady, Michigan, and report to the commanding officer for duty at that post. Paragraph 1, S. O. 41, Department of the South, March 14, 1883.

HOPKINS WILLIAM E., first lieutenant and assistant surgeon. The leave of absence granted December 28, 1882, is extended two months. Paragraph 5, S. O. 56, A. G. O., March 9, 1883.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the Society will be held at 19 Boylston Place, on Monday, April 2, 1883, at eight o'clock P. M. Reader, Dr. H. R. Stedman. Subject, Change in the Form of Insanity during Acute Attacks occurring in Young Persons. Four Cases. Dr. C. F. Folsom and Dr. Goldsmith will open the discussion. Annual Election of officers. Balloting at nine o'clock.

C. M. JONES, *Secretary.*

GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting will be held at the Medical Library Rooms, second Thursday of April, at four o'clock P. M. Paper by W. O. Hunt, M. D., Relations of Gynæcology to Obstetrics. The usual lunch will be had at the close of the session.

HENRY M. FIELD, M. D., *Secretary.*

BOOKS AND PAMPHLETS RECEIVED. — Physical Exploration of the Lungs by means of Auscultation and Percussion. A Course of Three Lectures delivered by invitation before the Philadelphia County Medical Society. By Austin Flint, M. D. Philadelphia: Henry C. Lea's Son & Co. 1882.

Twenty-Ninth Report upon the Births, Marriages, and Deaths in the State of Rhode Island for the Year ending December 31, 1881. Prepared by Charles H. Fisher, M. D., State Registrar of Vital Statistics. Providence: State Printers. 1882.

Second Biennial Report of the Board of Trustees and Officers of the Minnesota Hospital for Insane at St. Peter and Second Minnesota Hospital for Insane at Rochester. Minneapolis. 1883.

Annual Report of the Directors and Medical Board of St. Michael's Hospital, under the charge of the Sisters of the Poor of St. Francis. Newark, N. J. January 1. 1883.

Transactions of the American Ophthalmological Society, Eighteenth Annual Meeting, Lake George, 1882. New York: Published by the Society. 1882.

Fifth Annual Report of the Trustees, Superintendent, and Treasurer of the Illinois Southern Hospital for the Insane, at Anna. October 1, 1882. Springfield: State Printer. 1883.

In the Supreme Court of Appeals of Virginia. Lewis et als. *v.* Whittle et als. In the matter of the Medical College of Virginia. Brief of Messrs. Joseph Christian, William Wirt Henry, and Guy and Gilliam.

In the Supreme Court of Appeals of Virginia. Lewis et als. *v.* Whittle et als. On a Petition for Mandamus. Brief of John W. Johnston for Whittle and others.

A Study of the Malformations, Variations, and Anomalies of the Circulatory Apparatus in Man. With a Brief Consideration of some of the Principles governing their Production. By Randolph Winslow, M. D., of Baltimore, Md. (Reprint.)

The Pathology and Treatment of Diseases of the Ovaries (being the Hastings Essay for 1873). By Lawson Tait, F. R. C. S. Edin. and Eng. Fourth Edition, rewritten and greatly enlarged. New York: William Wood & Co. 1883.

Original Articles.

NEW MEXICO. ITS CLIMATIC ADVANTAGES FOR CONSUMPTIVES.[1]

BY J. HILGARD TYNDALE, M. D., NEW YORK.

The next question to interest us is that of

TEMPERATURE.

Points of importance are the mean temperature of months and seasons of the year, showing the *warmth, coolness or coldness* of the atmosphere in degrees, and the diurnal and annual ranges of temperature (the daily fluctuation, together with the number of degrees the thermometer runs over during a year) showing what we have to expect of the *equability of the temperature:* —

Monthly Means of Temperature. (Average Thermometrical Reading for each Month.)

LA MESILLA (FIVE YEARS).

January	41.1°	July	79.6°
February	46.5	August	76.5
March	55.5	September	69.5
April	59.8	October	63 7
May	69.2	November	45 6
June	77.3	December	44.4

SANTA FE (TEN YEARS).

January	28.2°	July	68.0°
February	31.7	August	65.9
March	39.1	September	62.5
April	45.5	October	49.8
May	56.0	November	36.9
June	65.4	December	28.1

SILVER CITY (FOUR YEARS).

January	37.2°	July	71.6°
February	41.0	August	68.5
March	47.2	September	63.5
April	48.5	October	56.6
May	61.7	November	39.6
June	70.3	December	39.3

FORT UNION (TWO YEARS). ELEVATION, 6700 FEET.

January	29.5°	July	72.5°
February	36.9	August	69.8
March	43.6	September	62.2
April	54.0	October	52.3
May	50.5	November	39.3
June	71.3	December	37.2

In all of the above four localities, representing the southern, northern, southwestern, and northeastern parts of the Territory respectively, we find the coldest weather to occur in the month of January. Then there is a constant upward tendency, until in July the highest readings of the thermometer occur; after which there is an equally steady decline to the end of the year.

Mean Annual Temperature.

Yearly average temperature, as the result of observation of a number of years: —

La Mesilla, five years, 3844 feet above sea level, 60.6°. Silver City, two years, 5890 feet above sea level, 53.7°. Santa Fé, ten years, 7013 feet above sea level, 48.7°. Fort Union, two years, 6700 feet above sea level, 49.8°.

The extent of fluctuation of temperature, to show what sort of equability we are dealing with, is illustrated by the range in each month for one year (1879 to 1880), and by the annual range (difference between hottest and coldest day of that year): —

Monthly Range.

LA MESILLA (SOUTHERN PORTION).

July	52°	January	53°
August	53	February	57
September	63	March	57
October	59	April	57
November	62	May	55
December	57	June	51

SILVER CITY (SOUTHWESTERN PORTION).

July	39°	January	54°
August	42	February	—
September	47	March	—
October	44	April	54
November	53	May	61
December	51	June	55

During part of February and March the minimum thermometer was unserviceable.

SOCORRO (CENTRAL PORTION).

July[1]	40°	January	50°
August	40	February	60
September	47	March	60
October	46	April	51
November	49	May	51
December	58	June	52

[1] Observer absent on repair duty.

SANTA FE (NORTHERN PORTION).

July	48°	January	57°
August	48	February	54
September	48	March	63
October	46	April	51
November	46	May	56
December	66	June	54

FORT UNION (NORTHEASTERN PORTION) FOR THE YEAR 1881.

January	87°	July	51°
February	88	August	44
March	71	September	59
April	70	October	61
May	48	November	63
June	49	December	70

What is accomplished by the thermometer in running over the degrees of Fahrenheit during a year will now be shown by the

Annual Range.

Station.	Elevation.	Maximum.	Minimum.	Annual Range.
La Mesilla.	3844	104°	17°	87°
Silver City.	5890	91	13	78
Socorro.	4635	95	6	89
Santa Fe.	7013	95	-13	108
Fort Union.	6700	96	-25	121

These figures serve to illustrate the worst feature of the climate of New Mexico, as indeed of the whole Rocky Mountain region, namely, a lack of *reasonable equability of temperature.*

To give an illustration of what we shall call an equable climate, I append the monthly and annual ranges, together with the mean temperature for one year (1879 to 1880), of a locality where equability abounds, but, as usual, in the company of a high degree of humidity: —

[1] Concluded from page 248.

Key West, Florida.

MONTHLY RANGE

July	19°	January	18°
August	19	February	19
September	18	March	24
October	15	April	24
November	24	May	20
December	15	June	22

Annual range, 30° (maximum, 94°, minimum, 64°).

MONTHLY MEAN.

July	84.4°	January	73.1°
August	84.7	February	73.1
September	82.5	March	76.3
October	79.8	April	76.8
November	74.0	May	79.1
December	74.2	June	83.4

Annual mean relative humidity, 74.4%

Equability of temperature is, of course, not found with altitude and dryness in New Mexico, and this fact makes it an undesirable climate for those cases of consumption in whom *general sensitiveness and irritability of the mucous membranes and the skin* is a prominent symptom. This state of hypersensitiveness is not affected by the ruling degree of temperature (the means), but by sudden and ungraded fluctuations. Neither is the "irritable heart" of such persons suited to high altitude, as it cannot be readily disciplined into normal action.

But for all cases of slowly progressive destruction and infiltration there can be no question that as dryness and equability are not found together in the temperate zone, dryness is the *absolute requirement*, and equability of temperature a secondary consideration.

A perhaps still worse element of temperature, which is an invariable accompaniment of dryness, is the *diurnal range*, the fluctuation of the thermometer within twenty-four hours, as we find it in the Rocky Mountain region or anywhere where the radiation of heat from the earth after sundown is not intercepted by the "moisture blanket." I select three stations at different latitudes in the Territory and do not give the mean of the daily changes in each month, but simply seize at random upon the first day of each month (1879 to 1880), by which the facts will be amply shown: —

LA MESILLA. LATITUDE 32° 17′.

1879		1880	
July	49°	January	21°
August	35	February	21
September	46	March	43
October	36	April	35
November	39	May	32
December	44	June	33

SOCORRO. LATITUDE 34° 5′.

July	28°	January	13°
August	18	February	16
September	33	March	34
October	24	April	30
November	18	May	28
December	33	June	34

SANTA FE. LATITUDE 35° 41′.

July			
August	40°	January	28°
September	32	February	14
October	32	March	41
November	22	April	34
December	23	May	25
	34	June	40

The diurnal ranges are all the way from 15° to 50° F. In the Signal Service the daily readings are taken at seven A. M., two P. M., and nine P. M. There are two reasons why this great daily fluctuation should not be considered quite so much of an evil factor. One reason is, that this variation is largely due to the sudden evaporation at nightfall, and is increased at night time; a time when patients should be in-doors, after spending the day in the open air. Another reason is, that changes at dry, elevated stations may be thermometrically great, but still convey only the sensation of comfort.

WINDS.

Neither theory nor the teachings of experience justify the belief that more or less frequent movements of the atmospheric ocean have a harmful effect upon consumptives. On the contrary, these movements are necessary for changing the air surrounding us, which in stagnation becomes charged with deleterious matter. Rain absorbs and precipitates these admixtures, while atmospheric motion scatters them. Great velocity of wind and persistency may and do prove harmful by the increased rapidity with which the warmth of the body is being continually carried off; an infliction under which the average consumptive gets chilled and fails to react, giving rise to internal congestions.

At high altitudes, and in the absence of high shelter, winds of great frequency and long duration are plentiful. Most towns in New Mexico are built along the line of railroads, and as these roads mostly run parallel to mountain ranges, the majority are visited by frequent and persistent winds, which are a source of great discomfort and irritation to the consumptive; more especially so when accompanied by *dust*. The only remedy for this nuisance lies in selecting such spots as are located in a nook or corner of the mountains, protected on several sides by high hills. In other words, protection against winds is to be found in *local shelter* only.

In the matter of local shelter, Santa Fé, Socorro, Silver City, Las Vegas Hot Springs (not the town), and Raton, are favored spots.

In the following tables will be found the *direction of the most prevalent winds*, as also the *number of times* they were observed to blow during the year from their respective points of the compass: —

LA MESILLA.

	N.	NE.	E.	SE.	S.	SW.	W.	NW.
1880	42	9	28	106	89	66	135	41
1881	77	19	15	121	88	76	90	71

West and southeast winds the most frequent.

SANTA FE.

	N.	NE.	E.	SE.	S.	SW.	W.	NW.
1880	100	109	105	80	53	201	43	133
1881	137	53	134	140	68	157	41	115

Southwest winds the most frequent. Northwest next.

FORT UNION.

	N.	NE.	E.	SE.	S.	SW.	W.	NW.
1881	175	103	83	49	191	197	153	144

Southwest winds the most frequent. Cold north winds in winter. West and northwest winds next in frequency.

SILVER CITY.

	N.	NE.	E.	SE.	S.	SW.	W.	NW.
1880	53	29	27	72	84	117	181	241
1881	109	7	4	53	138	91	116	262

Northwest winds by far the most frequent.

Having reviewed the physical aspect and the climatic advantages and disadvantages, a word or two with reference to the quality of food, social advantages, and medical attendance.

Since the advent of railroads food is abundant and of reasonably good quality at most hotels. Cattle are plenty. Vegetables and fruit are very sparingly raised, except in Southern New Mexico, where fine grapes grow in the Mesilla Valley, from which a wretched wine is manufactured. Prices at hotels and boarding-houses are reasonable.

In all the towns one will find very excellent society (organized, if I may so call it), composed of as hospitable people as you would meet anywhere. The presence of the lower class of Spaniards, with their filthy habits and unseemly adobe houses, is not particularly cheering. Yet to my mind there was something picturesque in their whole surroundings, as well as those of the Pueblo Indians, the descendants of the Aztecs.

The medical profession is well represented throughout, and the colleagues are well up to the times, energetic practitioners, and most diligent readers and students.

In New Mexico we do not find that variety and grandeur of scenery which distinguishes Colorado. It is of a more subdued order. Yet there are many quaint and charming spots.

A few remarks about individual places: —

RATON,

near the Colorado line, and the first station reached after passing through a long tunnel, is beautifully located and sheltered by high hills clad with a tolerably heavy pine growth. Dr. J. J. Schuler, who is practicing there, has just commenced to keep meteorological records.

LAS VEGAS

has 8000 inhabitants, and is the business centre of the Territory. The chief attraction are the Hot Springs, with their improvements in the way of hotels and the bath-house. The springs are about forty in number, but only a few are utilized. My interest in the springs confined itself to the *alkaline muriates*, known to be of benefit to consumptives by improving digestion and assisting assimilation. The analysis of these, as determined by Professor Hayden, is as follows, in what is called Spring No. 3: —

Sodium carbonate, 5.00. Calcium carbonate, and magnesium carbonate, 11.43. Sodium sulphate, 16.21. Sodium chloride, 27.34. Silicic acid, 2.51.

Traces of bromine, iodine, and lithium.

Temperature 123° F.

Private meteorological data stated that there had been no rain during the entire winter of 1881–82, and only a few inches of snow, which all passed off in three days or less. The kettle formed by the mountains is open only to the northwest and southeast, the openings of a cañon through which flows a clear stream dignified by the name of Rio Gallinas.

My thanks are due to Drs. C. C. Gordon and W. R. Tipton for much kindness, assistance, and hospitality.

SANTA FÉ.

is the oldest city in the United States, being 333 (one third of a thousand) years old. It has a foreign appearance in every particular, and everything in and about it makes you imagine yourself in Spain. The location of the city is such as to be sheltered from harsh winds, the situation being one of considerable slopes at the foot of a high mountain. Santa Fé is the capital of the Territory, and has, like most Mexican cities, a plaza in its centre, and many very beautiful gardens, also a very well-conducted hospital.

LA MESILLA,

one of several towns in the Mesilla Valley, a stretch of land in Southern New Mexico, about one mile wide in its northern portion, and spreading out to six miles in its southern. Taking our sensations and not the monthly range for a standard, the air is mild, with a bright sunshine nearly every day in the year. Vegetation does not decay, neither does meat; they undergo shrinkage and dry up to the extent of mummification in dead animals. In the absence of the congregation of many individuals in one locality we have here some of the true aseptic qualities, from the presence of which we may reasonably hope for repair of ulcerated tissue after a "line of demarcation" would be set up for the destructive process, and the healing process aided by water abstraction and shrinkage.

This valley presents to the invalid the advantages of a very moderate altitude, varying from 4000 feet near the Rio Grande to about 7000 feet in the high ranges of the Guadaloupe and other mountains. The protection of the valley from sharp winds is chiefly to the north.

In a letter to Dr. W. D. Bizzell, of Mobile, Ala.,[1] Dr. O. H. Woodworth writes from Mesilla, "Our climate is very dry, mild, and equable; no dew falls; the rainfall is only about eight inches yearly. The elevation of the Rio Grande Valley at this place is about 4000 feet above sea level. Our winters are very mild and pleasant; of course we have a few cold snaps occasionally, but not disagreeably so. Snow seldom falls in the Rio Grande Valley, which is bordered by mountains, and when it does it melts as fast as it falls, never remaining on the ground more than an hour or so. Our summers are cool and pleasant; the sultry, suffocating "heated terms" of the States are unknown. A person can sleep out-of-doors (owing to the absence of dew) the year round, except in rainy weather, of which we have comparatively very little."

Other places have been mentioned when speaking of elevation. Of course the benefits of the climate are not confined to the towns, but, on the contrary, it is my belief that in the as yet uninhabited country in the

[1] Climate of the United States considered with Reference to Pneumonia and Consumption. By W. D. Bizzell M. D. 1875

northwestern part of New Mexico and the adjoining portions of Arizona, as well as the Mesilla Valley in general, together with other valleys in Southern and Southwestern New Mexico, will be found choice spots, where *proper altitude is coupled to local shelter.*

SILVER CITY

is a new town, located some distance off the railroad, in the southern part of the Territory (Grant County). From this place Dr. Lewis Kennon, an ex-army surgeon, writes me as follows: "There is rarely a day in the year that an invalid cannot take exercise in the open air. I do not think there were three such days in the past winter.

"Diseases of the heart, either with or without valvular disease, do badly here. *All* diseases of the breathing apparatus do well, I can almost say without exception. Bronchial trouble is marvelously benefited almost from the first. The most miraculous changes for the better are produced in broken-down systems from overwork or dissipation, all forms of neurasthenia, and that state of debauch you Eastern folks see so much of. . . . We have every range of temperature, but dry in all and everywhere. Some authors speak of an ideal climate. This is very near the thing, for phthisis, here in Grant County."

In endeavoring to determine the suitability of the climate of New Mexico as a whole for a great proportion of patients suffering from the various forms of pulmonary consumption, we must compare the actual find to the ideal standard set up at the beginning of this paper on the one hand; on the other, look to practical results actually attained.

Elevation is present all the way from moderate altitude to the supposed "line of immunity," and higher **still.**

Dryness — a mean relative humidity of low percentage — forms the leading feature of climatic advantages. According to Vivenot's classification[1] the following range of degrees of moisture may be set down as representing so many varieties of dryness: —

Dry, below and up to 55%.
Moderately dry, 56 to 70 %.
Moderately moist (or moist), 71 to 85%.
Excessively moist, 86 to 100%.

Referring back to our tables it will be seen that the climate is a very dry one.

The possibility of a full and unobstructed sun bath is given in the number of perfectly clear days, which gives us not only length of time, but, with such diathermancy of the atmosphere as exists in those regions, great intensity of sunlight.

Equability of temperature, of course, does not exist at considerable elevations in the temperate zone. The great monthly and annual ranges of temperature at the various stations mentioned, together with the great and sudden daily fluctuations, show no approach to anything like reasonable equability of temperature. After a time, when meteorological records shall have been kept for several years at a number of places in the Territory, we would do well to select for our patients, in addition to the appropriate altitude, those localities wherein we find the nearest *approach to an equable temperature,* and the most perfect *local shelter from winds.*

In lieu of any further general observations I quote from the publication prepared for the railroad companies: —

"The statistics of the United States Army Reports demonstrate the important fact that New Mexico has the lowest ratio of respiratory diseases to be found in the country, the cases being 1.3 per thousand, while in various other localities the proportion ranges from 2.3 to 6.9.

"A very striking evidence of the curative character of this wonderful climate is found in the army records of the time of the Rebellion. Among the troops originally sent to New Mexico, in 1861, there were some 350 cases of catarrh. At the expiration of a year no cases were reported, and all who had the disease and remained in the country were cured. Dr. Symington said 'that in a residence of eight years in New Mexico he had seen but two cases of phthisis among the natives.'"

Of the advisability of remaining in one locality the year round I would say that a change in summer and winter is desirable. The more elevated positions in the mountains afford a retreat from the summer heat (especially in July and August) of the southern latitudes, while numerous little sheltered valleys and cañons afford protection from the sudden storms of winter. All these changes may be found within comparatively short distances, and in this manner many consumptives may continue to "live within the bounds of restricted vitality."

[1] Rudolph v. Vivenot, Ueber die Messung der Luftfeuchtigkeit, Schmidt's Jahrbucher, Band 132, p. 248.

CONSUMPTION IN NEW ENGLAND.[2]

BY E. P. HURD, M. D.,
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II.

As a definition of consumption that of Pollock is sufficiently exact. "It is a disease which ulcerates the lungs and wastes the tissues of the body." It is a disease attended with local and constitutional symptoms, but the latter are of the most importance. "Pulmonary consumption is only a fragment of a great constitutional malady," says Latham; it is the expression of a peculiar diathesis whose distinctive characteristic is imperfect tissue nutrition. The constitutional disorder which often precedes and always coexists with the local symptoms is marked by fever, progressive failure of the digestive and nutrient functions, and emaciation. The local disorder consists in an exudation of inflammatory products which will not liquefy nor resolve, and of a cellular proliferation known as tubercle. This deposit — peribronchial, perivascular, intra-alveolar — readily undergoes caseation and softening. Whatever be the form of phthisis, there is more or less rapid and progressive involvement of the lung tissue in a destructive morbid process.

The tendency of recent pathology is to recognize in tubercle the essential element of all kinds of phthisis. But if tubercle be the essential element there is another element which must not be overlooked, namely, the inflammatory. The point to be insisted on is, as Tyson well remarks, "that all these local processes are tubercular and all are inflammatory, the catarrh of the lung and tubercle granulations being in all cases the initial lesion, whence it extends peripherally by desquamative catarrhal pneumonia, or centripetally

[2] Continued from page 293.

by a tuberculous peribronchitis, the former furnishing the rapid and the latter the slow forms of phthisis."[1]

With regard to tubercle, in what light are we to regard the morbid product?

"It is a pitiful production, a new formation, from its very outset miserable. A degeneration of plasma, a deviation from the typical conformation." (Virchow.)

"Cell formations in tubercle do not differ from inflammatory exudation, nor from those normally existing in lymphatic structures. An overgrowth under irritation is the term now applied to this extension of adenoid growth." (Pollock and Burdon-Sanderson.)

"Whatever doctrine of histogenesis we may adopt, we must regard tubercle as the result of an exudation of degraded plasma, a plasma unfit for organization, if we hold to the exudation theory; if we adopt the cellular theory, then tubercle is to us simply an imperfect cell formation. In either view it is the final expression of an irritative process." (Jaccoud.)

What is this irritative process? Here pathologists find themselves in deep obscurity, and their explanations are virtually an avowal of ignorance. We can get no clear light, but we can obtain hints toward a better understanding of this mysterious subject.

"Tuberculosis has only one constant cause, which is a peculiar condition of the organism, or diathesis called the tuberculous diathesis. Whatever may be the external appearance of individuals so predisposed, the diathesis, *by the characters of its product*, clearly denotes a constitutional debility. By virtue of this disposition the organism is affected by irritative provocations which would be inefficacious of themselves; it responds to the irritation according to its forces by a new formation, slow and of bad nature, and not by the rapid and transitory formations of ordinary inflammation. By virtue of this diathesis, finally, it is able to produce spontaneously, without any known irritative influence, the degraded elements which are the token of the diathesis." (Jaccoud.)

The same pathologist goes on to state the doctrine which is the only foundation of rational therapeutics, that this "diathesis with imperfect products has, as its primary cause, imperfection and insufficiency of nutrition."

We come back, then, to the view with which we started, and which, in the present state of science, is the final word on the subject. This diathesis may be inherited or acquired, — ordinarily both, — although cases are abundant where tubercle has developed in individuals in whom no hereditary tendency to this morbid formation could be traced. Those who believe that the bacillus theory of tuberculosis propounded very recently by Dr. Robert Koch has been proven by the results of his cultures and inoculations, regard the bacillus as the specific irritant, which, acting on a predisposed organism, excites destructive inflammatory changes, among the products of which are tubercle granulations. This theory approximates tuberculosis to the infectious zymotic diseases. It offers a plausible explanation of the contagiousness of tubercle, a doctrine becoming more and more generally admitted by medical men. It moreover demands, as the starting point of pulmonary consumption, the inhalation in the air of respiration of an infectious germ from the vegetable world. It, however, presupposes the existence of a favorable soil for the development of the micro-organisms; in short, the tuberculous diathesis of which we have just spoken. These germs are inert unless there be a fundamental viciousness of constitution degrading the vital properties of the tissues, and thus rendering the latter a suitable habitat for the parasite. This must be conceded, for on no other explanation can we account for the immunity which so large a portion of mankind possess from the inroads and ravages of this malignant bacterium.

It is but proper that the medical profession should wait for stronger evidence than has yet been given that this microphyte is the cause, and not an unimportant concomitant merely, of tubercular disease. And yet who that has followed the recent mycological investigations and has fully mastered the results of the work of Robert Koch, so patient, so painstaking, so conscientious, but feels the impossibility of resisting his conclusions, provided only that his observations were accurate?

What are the producing causes of the tuberculous diathesis? First of all we must place heredity; in other words, a tendency to tuberculous disease is inherited. A considerable proportion of cases of phthisis occurring among the native inhabitants of New England must be classed as congenital. These patients are born with a taint, derived from father or mother, or both. Often the disease manifests itself despite every possible care to prevent or oppose it. Here the rigor of our New England climate powerfully coöperates with the factor just mentioned, and the feeble powers of life struggle in vain with destructive environing agencies. The individual was born badly equilibrated, and slight incident forces are sufficient to destroy the organic balance. While we do often meet with cases of this kind in New England where the patient early succumbs to inherited tuberculosis, we oftener, I think, meet with cases where no hereditary tendency to tubercle can be traced, but where children have inherited damaged constitutions from parents broken down or enfeebled by debauchery, intemperance, syphilis, or general bad habits of living. Jaccoud distinguishes this cause from heredity by calling it "innateness." You inquire into the antecedents of your patient and you find that the parents were intemperate, or, it may be, were driven by poverty and starvation from some foreign home to this country. They may even seem to be robust people, but history discloses the fact that the children were born at a time when the parental constitution was depressed by bad hygiene, overwork, and privation of suitable food.

Here the climatic element comes in as an important ætiological factor. Consumption in these patients often takes the acute form, with passive invasion of the whole lung by miliary tubercle, death taking place by interruption of hæmatosis, without softening. Or the disease may be acute, with progressive deposits, and the deposits may rapidly undergo softening. In the majority of cases the symptoms are those of chronic catarrhal pneumonia. Such cases are not to be looked upon as altogether hopeless. Nutrition is depressed, but there is often considerable vital reaction. If you can rescue them for a time from the rigor of the climate, and can arouse a vigorous reaction by suitable nutrients and tonics, you will have gained a victory, for you have not a confirmed hereditary predisposition to contend against.

With regard to the acquired diathesis we undoubtedly often witness instances where a constitution, re-

[1] Boston Medical and Surgical Journal, vol. cviii., p. 232.

bust by inheritance, has been degraded by vicious habits of living, by bad hygiene, bad surroundings, bad food, till that point of vital depression is attained which is the immediate antecedent and condition of tuberculosis. Such organisms may be regarded as an easy prey to Koch's bacillus. Insufficient alimentation, want of suitable clothing, coupled with unhealthy habitations and grinding toil, are the most productive conditions of consumption among the poor in New England.

The last number of the *North Carolina Medical Journal* contains an interesting editorial (written at my request) entitled Phthisis in the Southern States. Facts are there stated which are in striking agreement with conclusions above set forth. In the city of Wilmington, with a population of 18,000, of which 7216 are whites and 10,781 negroes and mulattoes, there were in 1880 six deaths from consumption among the whites and twenty-eight among the negroes. This, Dr. Wood says, is a fair ratio of deaths from consumption between whites and blacks, confirmed by observation. Consumption is much more prevalent in the negro than the native white population; in fact, it is on the increase among the negroes while it is comparatively infrequent among the whites. A ratio of one in 1203 is a small mortality from phthisis, and is much less than obtains in this country with natives. On the other hand, the mortality in the negro population was one in 249, which is something like the mortality from phthisis among our foreigners.

What is the cause of this excessive proclivity of the blacks to fall victims to phthisis? Dr. Wood adduces four reasons: (1.) Syphilis among the negroes. (2.) The huddling of large families in small, ill-ventilated huts. (3.) Exposure and insufficient food. (4.) Intemperance in ardent spirits. Dr. Wood places strong emphasis on the first factor, namely, the debilitating influence of syphilis. It breaks down the negro constitution and makes him tuberculous.

There is no doubt about the intimate relation between syphilis and tubercle, and that there is a clear, straight track from one pathological territory to the other. We think, however, that syphilis is not often a predisposing cause of tuberculosis in New England. At least we have not often been able to trace, in specific instances, a clear ætiological connection between the two diseases.

With regard to Dr. Wood's second cause, that is, crowding of families in close tenements, we think that we have in numberless instances traced the inception of scrofula and tubercle to this cause. Many of our foreigners live in just such miserable, damp, ill-ventilated tenements, so shaded that a gleam of sunshine scarcely ever enters them. The cast-iron stove, of which Dr. Wood speaks in deprecating terms as a modern abomination rather than a modern improvement, if a factor in the ætiology of the tuberculous diathesis in the Southern States (being an air-poisoner) is far more an evil with us.

The third reason alleged why consumption is so prevalent among the negroes, namely, that their food is of a wretched quality, besides being often insufficient in quantity, is undoubtedly a powerful predisposing cause of consumption among the foreign population of New England. They live on poor fare because they have not the means for providing themselves with good food. Too little animal food is eaten, and too much bread (often of a poor quality), and pork and fish. An insufficient dietary is not seldom supplemented by bad rum, of which New England produces a liberal supply.

That Dr. Wood's fourth predisposing cause, namely, intemperance in strong drink, is as common among our foreigners as it is among the native colored race of the South is undoubted. In terms of the bacillus pathology excessive indulgence in ardent spirits prepares the soil for the tubercle bacillus.

Climatic changes have much less to do with the development of phthisis in the South than in New England, for the negro is acclimated.

A CASE OF LEFT LUMBAR COLOTOMY, WITH RECOVERY.

BY FRANK L. SMITH, M. D., STAFFORD SPRINGS, CONN.

MRS. H., sixty years of age, born in this country, married, and the mother of four children, has never had any serious sickness, but of late years has been of constipated habit, but not of sufficient severity to induce her to seek medical advice. On the 22d of July, 1882, the writer was summoned to attend her; found her lying on the lounge, complaining of pain in the bowels, and reported having taken during the four preceding days two full doses of Epsom salts and senna, besides half a bottle of "castoria," with no effect whatever upon the bowels. Abdominal palpation failed to discover any marked tenderness or any tumor of the abdomen; very little constitutional disturbance. Prescribed one tenth grain of Clutterbuck's elaterium, to be taken every two hours until an operation of the bowels occurred.

The following day she reported two operations of the bowels after four doses of the elaterium. The next day, the 24th, I found her about the house, feeling quite well and comfortable.

Was called again on the 27th, and found much the same condition as on first visit, with no movement of the bowels since that time; again prescribed the elaterium, one tenth grain every two hours until an operation, to be accompanied by large rectal injections.

July 28th. Has taken six doses of the elaterium and the injections, as directed, but no operation; abdominal tenderness slight, and not a great amount of pain. Gave her pil. podophyllin comp., to be taken at intervals of two hours.

July 29th. No movement of the bowels and rather more pain; temperature normal; pulse slightly accelerated. Now prescribed croton oil, one-half-drop doses to be taken every hour until eight doses have been taken or vomiting intervenes.

July 30th. The bowels have not moved, but after taking the sixth dose of croton oil vomiting set in; the matter vomited was as truly stercoraceous as possible in odor, color, and appearance. The rectal injections have been continued. Rectal examination discovers an empty rectum, with an apparent obstruction about six or seven inches from the anus; an attempt to pass flexible tube gives the sensation of its entering a fold of the gut. Prescribed quinine one grain every six hours. No more cathartics to be taken.

July 31st. No change. The friends becoming anxious, Dr. Hills, of Willimantic, was called in consultation. Advised injections of mustard water through

flatus catheter, and give hyoscyamus and belladonna, all the patient will bear. Vaginal examination discovers nothing bearing upon the case. The mustard-water injections come away, bringing nothing with them.

August 1st. Condition unchanged, except that the patient has had some stercoraceous vomiting this morning, and some delirium from the belladonna. There being but little constitutional disturbance, I advised desisting from any active treatment for the present; give nourishing food, and that which will leave the least residue. Continue quinine, and give enemata three times a day, with turpentine stupes to the abdomen to relieve tympanites.

August 6th. Condition much the same. Now commenced applying electricity, one pole externally, following the course of the large intestine, upon the abdomen, the other inserted into the rectum. A current so powerful as to be unbearable upon the abdomen is scarcely felt in the rectum. Continued electricity for a week, together with injections of milk, and once or twice injections of glycerine.

From this time to the 22d the treatment was expectant, with the exception of aspirating the bowels for the relief of the tympanites on the 14th and 18th, which afforded but slight relief. On the 22d the hand was introduced into the rectum after Simon's method, but the obstruction could not be removed with the use of a reasonable amount of force. The tympanites was now extreme, and, the patient beginning to show unmistakable signs of failing, the operation of colotomy was advised as a *dernier ressort*. In consultation with Dr. Newton, on the 24th, the conclusion was reached that unless relief from the obstruction were obtained the patient must die, and that soon. The consent of the friends was obtained, and the following morning appointed for the operation.

August 25th. The patient passed a night of discomfort from the distention of the abdomen and embarrassment of respiration. The temperature at ten A. M. is 101° F., pulse 120, the patient courageous and confident. The operation was performed by the writer, assisted by his brother, Dr. H. A. Smith, and Dr. Clark. The patient was etherized, and placed upon a table on her right side, with a pillow beneath her loin. The anterior and posterior superior spinous processes of the ilium were made out, the distance between them measured, and a transverse incision five inches in length was made, the centre of which was exactly half an inch behind the mid-point between the anterior and posterior iliac spinous processes. Immediately beneath the skin was found a layer of adipose tissue two inches in thickness, which necessitated making the incision in the skin an inch longer. The muscular layers were very thin; the layers of areolar adipose tissue lying immediately upon the intestine were overloaded with fat. Care was taken to make the incision in the deep structures of the same length as the primary one. The gut was easily found; two long silk sutures, armed with a needle at either end, were passed through it, parallel to the sides of the wound, the four needles passed through the skin above and below. The gut was then opened, the loop of the sutures drawn out and divided, and the four points made secure, except that one of the sutures tore out through the gut, as it did on two further attempts to secure it, so that a clamp was at last applied to retain it. Brownish-colored, semi-solid fæcal matter poured forth from the opening the instant it was made, and continued until an ordinary chamber vessel was nearly filled. The edges of the skin were then approximated, and the wound covered with a light dressing. The patient rallied well from the operation. At nine in the evening her pulse was 120, temperature 103.5° F.

August 26th. Slept well; the abdomen now perfectly flaccid; general condition good; the fæcal fistula is still discharging the contents of the bowels.

The case went on uninterruptedly, rectal injections being used frequently, to the 6th of October, when she had a profuse discharge of fæces by the rectum, the first natural movement of the bowels for nearly three months. From that date to the present (February 1st) she has continued to improve, the wound now being scarcely half an inch in extent, fæcal matter passing both by rectum and artificial opening. It is hoped that the opening will close spontaneously, otherwise a plastic operation will be performed for its accomplishment. It is hardly necessary to add that the patient has long been up and about her ordinary household duties, taking the entire care of the wound herself.

The cause of the obstruction is still in doubt; if stricture of the intestine, why should it ever have relaxed? There is no cancerous cachexia whatever present. The insensibility of the rectum is also a point of interest, as indicated in the application of electricity.

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, M. D.

A RETROSPECT.

The dearth of matter for a report has well nigh driven the reporter to ask for an extension till times become better, and he probably might have yielded to this weakness had it not been that having held out so long untired he is unwilling now to stop for breath. The system of reports on the various departments of medical science was begun in the Journal in September, 1872. The first report was on anatomy, and the reporter has made his little semi-annual contribution without interruption till now. Under the circumstances it seems to him that it might not be amiss to look back and see whether anything of lasting value has been added to anatomical science during the past ten years. This decade has been fertile in histological and embryological work, and there is no question that, especially in the latter branch, considerable progress has been made, but though minute anatomy and development have both been more or less considered in these reports, space will permit us to treat only of the progress in coarse anatomy. In this retrospect we shall not necessarily confine ourselves to works mentioned in the reports, which, after the first one or two, have made no claim to completeness.

New editions of the text-books in use in our schools have followed one another, showing for the most part considerable improvement. Quain's Anatomy has reached a ninth edition, and stands *facile princeps*, not, perhaps, as a student's text-book, but as a treatise of anatomy in the English language. It is likely, however, to find a formidable rival for this position of honor in Prof. Harrison Allen's work, though enough of it has not appeared to justify a final judgment. We are not aware that any new treatise of much value has appeared in Germany, but Rüdinger's Topographike Anatomie (1873–78) must be mentioned as remarkable for the novelty of many of the

dissections and sections, and for the beauty of the illustrations. We must not omit Henke's admirable Atlas of Topographical Anatomy (edition of 1879), which in many respects we consider the most useful atlas for the practical physician.[1] Certainly no new work on anatomy that has appeared during this period has had so striking or deserved success as Tillaux's Traité d'Anatomie Topographique, which has already reached a third edition.

Bone. — A good deal has been written during this period on the structure of bone from a mechanical point of view. The matter was brought into prominence by Hermann Meyer, who published a paper on the architecture of the cancellated tissue in the *Archiv für Anatomie und Physiologie* in 1867. The fact that bones were built by "studs and braces" was announced at the Boston Society of Natural History in 1849 by the late Prof. Jeffries Wyman, who alluded to references to this point by Bourgery and Jacob, and also by Ward in his excellent Osteology. It is also mentioned by Humphry; nevertheless the reader would gather from some of the articles we are about to refer to that the subject was entirely a new one. A little before the beginning of the period embraced in this report Wolff wrote on it in Virchow's *Archiv* for 1870. Wolfermann showed in Reichert and Du Bois Reymond's *Archiv*, 1872, that in the bones of man and animals the arrangement of the trabeculæ always presents some practical mechanical advantage. The internal structure of the vertebræ is discussed in a beautiful little monograph on the vertebral column by Bardeleben (Jena, 1874). His views agree with those given twenty-five years before by Wyman, and he has carried the study to finer details. A year later Mr. Wagstaffe pursues the question of the cancellated tissue in St. Thomas' Hospital Reports. His account of the structure of the vertebræ does not agree with Bardeleben's, whom the reporter is inclined to follow, but he gives many excellent descriptions of the arrangement in other bones. Langerhans writes on the same subject in Virchow's *Archiv*, 1874, and in the same year the same journal contained an article by Merkel on the femur, in which he describes as the *shenkelsporn* the plate that splits off from the posterior surface of the neck of the femur to run in the cancellated tissue, which Prof. Henry J. Bigelow had already described in his monograph on the Hip (1869) under the name of the "true neck" of the femur. Dr. Bigelow wrote a paper on this point in this journal for January, 1875. The reporter also published a paper on the "true neck" with observations on lower animals in the *Journal of Anatomy and Physiology* for the same year. Dr. Ogston, in an article in the last mentioned journal, in 1878, expresses the opinion that those trabeculæ derived from surfaces of the bone covered with cartilage run perpendicularly to the surface, while those from sides covered with periosteum run parallel to them, and gives many diagrams to bear out his view. Often the fact seems clear, but in some parts the appearances are not so easy to explain, and the author has to call in the modifying action of pressure. Any one interested in this question will find a great deal that is valuable in the papers mentioned. We are not prepared to say that any new principle has been absolutely demonstrated, or that any particular new fact of very great importance has been made known (excepting, perhaps, the "true neck"), bu much good work has been done in this particular branch.

The Spinal Column. — Besides the portions of the preceding papers that refer to the spine we must mention an admirable article by Struthers, entitled Variations of the Vertebræ and Ribs in Man.[2] This is not merely an account of anomalies, it is much more, it is a study of the normal structure also. There are several points concerning which authorities differ, and Professor Struthers teaches us what we must regard as normal by giving the results of the comparison of many specimens.

Bouland discussed the curves of the spine in Robin's *Journal de l'Anatomie*, etc., 1872. He found that ligaments take no part in causing the curves which, as a rule, depend in the back chiefly on differences in thickness of the front and back of the bones, and in the neck and loins on similar differences in the cartilages. Dr. Bouland concluded that the cervical and dorsal curves depend on laws of organization, but that the lumbar curve is due to the upright position, as it does not appear till the child learns to walk.

Dr. Ballandin wrote a remarkable essay on the same subject in Virchow's *Archiv* of 1873. He is not inclined to admit that the difference in height between the front and back of the bodies of the vertebræ has any influence in forming the curves. The dorsal curve, according to him, is due to the confining influence of the walls of the thorax and the pressure of the inclosed viscera. The cervical curve appears when it is necessary for the spine to bend forward to support the head. The origin of the lumbar curve is very curious. In brief, it depends on the firmness of the ilio-femoral ligaments, which incline the pelvis and pull the lumbar region forward when the legs are fully extended, and the erect position is assumed. The observations on which the last statement rests seem to us almost impossible to refute, and we look on this paper as marking a real advance in our knowledge. We can only mention two valuable papers bearing on the proportions of the spinal column in which the influence of sex and age are considered. One by Ravenel,[3] and one by Aeby.[4]

A great deal has been done in anthropological societies, especially about the skull, but we cannot discuss so small a part of anatomy in sufficient detail to make the report profitable. We would mention, however, a paper by Broca in the *Revue d'Anthropologie*, 1873, concerning the direction of the occipital foramen and a proposed modification of Daubenton's angle, by which it is measured. Dr. Schmidt[5] studied the question of what is the horizontal plane of the skull, and confirmed the decision of the *savants*, who, at Göttingen, in 1861, decided that in the normal position the zygoma is horizontal, and when a curve at the front of the zygoma destroys its value that the level should be obtained by a line continued from the zygoma to the lower border of the orbit.

One of the most remarkable contributions to our osteological knowledge, referring as it does to a tolerably evident fact which had escaped notice, is that of Hyrtl,[6] in which he shows that there are two temporal ridges instead of one. They were subsequently studied

[1] Since the above was written we have received the first half of Henke's Text-book to accompany the Atlas.

[2] Journal of Anatomy and Physiology, 1874.
[3] Zeitschrift für Anat. und Entwick., 1877.
[4] Archiv für Anat. und Entwick., 1879.
[5] Archiv Anthropologie, Bd. 9.
[6] Memoirs of Vienna Academy, vol. xxxii.

by v. Ihering,[1] who wrote also concerning their relations to the layers of fasciæ. These structures are still quite ignored by the great majority of writers on anatomy.

The "scapular index" or the relation of the breadth to the length of the scapula is a test invented by Broca,[2] which has attracted a good deal of notice. Professor Flower and Dr. Garson made a number of observations with it at the Hunterian Museum. The results of all these observers go to show that in man and the apes a long scapula indicates a higher type than a short one.

Dr. Garson has given us a series of measurements of the bones of the thigh and leg,[3] showing that there is great inequality in the length of the legs of a great many individuals. Indeed, inequality seems to be the rule, and to depend chiefly on the femora. This is a point of great practical importance, as it has made utterly worthless all data concerning shortening after fractures.

Muscular System. — A vast number of observations of more or less rare muscular anomalies can be found in anatomical journals, but they are mostly isolated cases. Bardeleben has published a paper on the *sternalis*,[4] in which he gives an analysis of 120 cases. Papers of this kind are far more fitted to advance our knowledge than any number of detached cases however remarkable. Among the more valuable papers in this branch we would mention one by Professor Humphry[5] on the disposition of muscles in vertebrate animals, and three lectures on human myology by the same author, reported in the *British Medical Journal*, June and July, 1872. Dr. Bardeleben has presented through publications of Jena two papers on the relations of muscles to fasciæ, and of muscles making fasciæ tense, which have not received the attention they seem to us to deserve.

A great many papers of varying value, and we regret to say for the most part intolerably dry, have appeared on the mechanics of various joints and muscles. Those of Hermann Meyer, among others, deserve study. The movements of the thorax have been considered in many ways, and, as might be expected, without any conclusive concurrence of results. We think, however, we have heard nearly the last of Hamberger's bars, which, indeed, would have been forgotten a generation ago, had they not unfortunately imposed upon Hutchinson, who perpetuated the error through his justly celebrated article, Thorax, in Todd's Cyclopædia of Anatomy and Surgery. Perhaps in no department of coarse anatomy has there been so much activity as in that of applied mechanics.

Nervous System. — The most important contributions in this department have reference to the brain. Dr. Morris reported in the *British Medical Journal* of October 26, 1872, the occurrence of a brain weighing sixty-seven ounces, which continues to be the heaviest normal brain on record. A great deal has been written about the weight and structure of the brain as an index of the mind, much of which may be set aside as twaddle, and almost all of which is unsatisfactory. Much good work has been done to elucidate the arrangement and development of the convolutions, and also their relations to the skull. We should mention a paper by Ecker, on the development of the fissures, and one by Pansch, on their typical arrangement, both in the third volume of the *Archiv für Anthropologie*, and one by Passet, on the sexual differences of the brain, in the fourteenth volume. Several authors have studied the relations of the brain to the skull, of whom we refer especially to Turner's paper in the *Journal of Anatomy and Physiology*, vol. viii., 1874; to Lucas Champinionière's monograph on trephining; and to a very elaborate paper by Hefftles in the tenth volume of the *Archiv für Anthropologie*.

The arachnoid is no longer a serous membrane but a net-work of areolar tissue of varying density, separating the subdural space from the subarachnoid one. The researches of Professor Axel Key and Dr. Gustav Retzius, on the structure of the membranes, are among the most valuable in the decade. The cerebral circulation[6] has been investigated by Heubner, and by Duret.[7] They both point out that at the base there are but few anastomoses between the smaller arteries, each of which seems to have a certain area to nourish. They differ as to the surface of the convolutions, where Heubner finds a rich arterial system of anastomoses, which Duret thinks is due to errors of observation. With regard to the venous intra-cranial circulation we must mention once more Rüdinger's demonstration that at the torcular the superior longitudinal sinus as a rule turns to one side, and the straight sinus to the other, there being, however, a communication between them. The dividing of the superior longitudinal into two nearly equal sinuses we believe to be of all the arrangements the rarest. But very little attention, however, has been given to this fact. A valuable paper on the sinuses and their variations, by Mr. Knott, is to be found in the *Journal of Anatomy and Physiology* for October, 1881.

Viscera. — There is not a great deal to record in this department without entering into minute anatomy. The microscope has indeed been used to good effect, as is shown by valuable papers on the epithelium of different parts of the alimentary canal, on that lining the renal tubules, and on the minute structure of the testis and ovary. In the province of gross anatomy the researches of His,[8] on the shape of the liver, deserve mention. He has shown that instead of a thick posterior border there is really a posterior surface. His method of making hollow organs rigid by a thorough arterial ingestion of chromic acid (one per cent. or one half per cent.) seems an admirable one.

The pharyngeal tonsil, constant in children, occasional in adults, which is really a collection of adenoid tissue at the top of the pharynx, has become recognized.[9]

Much has been written concerning the position of the ovary. Doubtless with advancing years and after repeated pregnancies it is a very variable one. The reporter is very strongly inclined to accept His's observations,[10] as showing that in ts normal condition the ovary lies with its side against the wall of the pelvis, that its long axis is about vertical, the free border being behind and the attached end below. The Fallopian tube is looped over the ovary, rising along the front and bending over it.

We must not omit to mention some researches on

1 Archiv für Anat. und Phys., 1875.
2 Bulletin de la Société d'Anthropologie de Paris, 1878.
3 Journal of Anatomy and Physiology, 1879.
4 Zeitschrift für Anat. und Entwick., Bd. 1, 1876.
5 Journal of Anatomy, 1872.
6 Allgemeine Med. Cent. Zeitung, 1872.
7 Archives de Physiologie, 1873-74.
8 Archiv für Anat. und Entwick., 1878
9 Vide Sanghofner., Proceedings of Vienna Academy, 1879.
10 Archiv für Anat. und Entwick, 1881.

what is perhaps to be considered remains of an embryonic arrangement in the coccygeal region, or more accurately the result of tardy or arrested development. It is in short a depression or dimple and sometimes a blind tubular canal in the median line a little above the coccyx. Dr. R. M. Hodges called attention to it in the Boston Medical and Surgical Journal, 1880. He had several times found it the centre of an inflammation due to the irritation of hair, which apparently had collected in it. It is mentioned in the Surgical Memoirs of the late Dr. J. Mason Warren, and otherwise had not received notice till a short time before Dr. Hodges' paper. It formed the subject of a communication presented by Dr. Lawson Tait to the British Association in 1878, and published in *Nature* during the same year, who we believe thought it corresponded to the depression above the origin of the tail in dogs. It was written on at considerable length by Ecker, at about this time, in volumes xi., xii., and xiii., of the *Archiv für Anthropologie*. He describes as occurring in this region a whirl of hairs, differing from most others in being convergent instead of divergent.

Supernumerary nipples and mammæ have received attention, and the reader is referred to a curious paper on the subject by Bruce, in the *Journal of Anatomy and Physiology*, vol. xiii., 1879, and one by Leichtenstein in Virchow's *Archiv*, Bd. lxxiii., 1878. It appears that this peculiarity is by no means a very rare one, and that it may occur apparently with equal frequency in either sex. This last point, however, is still unsettled.

Accessory Thyroid Bodies. — Kadyi has shown in the *Archiv für Anat. und Entwick.*, 1879, that extra thyroid bodies are formed in the submental region and even in the floor of the mouth, the result, probably, of separation of portions of the gland at an early period; a fact which we mention on account of its surgical importance. Zuckerkandl has published a monograph on the same subject at about the same time.

By way of conclusion to this sketchy and imperfect retrospect we may say that while no great new fact has been brought to light, much good work has been done that has not yet borne its full fruit. Startling discoveries are not to be expected, but the collection of properly observed and classified facts may lead to the enunciation of laws. The most valuable work appears to us to have been done in mechanics, in the brain, and in the collection of anomalies.

Hospital Practice and Clinical Memoranda.

NEW ENGLAND HOSPITAL.

CASES OF LACERATION OF THE CERVIX UTERI OCCURRING IN THE NEW ENGLAND HOSPITAL DURING THE TWO YEARS BEGINNING OCTOBER 1, 1880.

REPORTED BY DR. MARY A. SMITH.[1]

In this report are included only such cases as were considered of sufficient gravity to require surgical interference, and not the cases of slight laceration which needed only a few weeks of rest and tonics, combined with local uterine treatment.

During these two years there were forty cases recorded. Of these three finally so far yielded to treatment that an operation was considered unnecessary. Altogether there were thirty-nine operations performed upon thirty-seven patients, a secondary operation being necessary in two instances.

[1] In a paper read before the New England Hospital Medical Society, January 18, 1883.

SITUATION OF THE INJURY.

On the right side	1
On the left side	8
Bilateral	28
Stellate	3
Total	40

CHARACTER OF LABORS IN WHICH THE LACERATIONS OCCURRED.

Rapid	16
Tedious	7
Difficult	3
Forceps used	8
Unknown	6
Total	40

In fifteen instances the laceration occurred in a primipara and twenty-five times in a multipara. In regard to these last the date of the injury was so unsatisfactory as to be of little or no value.

General condition before operation: Of the whole number only four might be said to have enjoyed fair health before the operation. As a rule, the usual symptoms in such cases were complained of. Pain in head, back, or extending down the limbs; discomfort on standing, or inability to walk without fatigue; generally some menstrual disorder prevailed, either irregular or painful menstruation or more frequently menorrhagia. Subinvolution and leucorrhœa were generally present, and sometimes the remains of a former cellulitis and subsequent displacement of the uterus were found, where the rent had extended beyond the vaginal junction. Laceration of the perinæum was also a frequent accompaniment.

In all cases some preparatory treatment was given either in the hospital or at our dispensary.

Squibb's ether was the anæsthetic invariably used.

The only antiseptic measures employed were laying the instruments in a one to forty solution of carbolic acid, and wringing the sponges used out of a similar solution. All assistants at an operation were obliged carefully to disinfect the hands.

Silver wire sutures were used in thirty-six operations, catgut in the remaining three.

The after-treatment consisted in keeping the patient in bed, though she was allowed to lie in any position; liquid diet the first week. The catheter was not employed, but the vagina and external genitals were cleansed with carbolized water after each micturition. The bowels were confined for the first week, then moved with oil. The stitches were removed on the tenth day, unless menstruation had come on in the mean time, when they were left twelve or fourteen days. In ordinary cases the patient began getting up after two weeks.

RESULTS OF OPERATIONS.

Perfect union	33
Partial union	4
Secondary operations	2
Total	39

In three of the cases which failed to unite menstruation recurred in a day or two after the operation, and possibly prevented the healing.

In twenty cases perineorrhaphy was performed either at the same sitting or before the patient was discharged.

In three of these double cases the catgut sutures were used. Twice the union was entire, once only partial.

In only one case was a fever curve required. This patient had, previous to the operation, suffered from pelvic cellulitis, for which she underwent a long course of treatment till the tenderness subsided. She was probably operated upon a little too soon, for a fresh attack of cellulitis supervened, which required ten weeks of after-treatment before the patient could be sent home well.

All the patients were requested to report their subsequent condition. Most of them have since been heard from, and are either steadily improving or entirely restored to health, in many cases the change being very marked.

Reports of Societies.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.[1]

C. B. NANCREDE, M. D., RECORDER.

A UNIQUE SPECIMEN OF OSSIFICATION AT THE AORTIC ORIFICE.

EXHIBITED by DR. J. T. ESKRIDGE.

It was sent him from a distance and consisted of about one inch of the cardiac end of the thoracic aorta, the aortic semi-lunar valves, and the immediate portion of the heart. The specimen was removed from a man, who, aged about seventy, had suffered a number of years from severe heart disease. The walls of the large arteries were thickened, rigid, and contained numerous deposits of inorganic matter, The left ventricle was enormously enlarged. He was unable to obtain any information with regard to the condition of the cardiac valves, other than those of the aortic orifice.

Description of the Specimen. — The aorta, where it surrounds the valves for about half an inch in extent, is a hard, unyielding substance of fibrous tissue, and calcified and ossified matter. The valves in several places are about one fourth of an inch thick, and seem to have been almost entirely transformed into bone-like material. They are rigid and immovable, and have almost completely cut off all communication between the heart and aorta. One of the leaflets, about three fourths of an inch in all directions with its vegetations, stretches across the aorta, lies against, and is apparently adherent to, the other segments of the valves, the latter being curled upon themselves. The central portion of the aorta is entirely occluded, and only two small openings through which the blood could have escaped from the left ventricle are seen between the valvular leaflets near their peripheral attachments. The larger of these holes admits a flattened probe three millimetres wide by one thick; the smaller is about two thirds as large. Three other smaller orifices have existed, but these were obliterated before death by a thin, fibrous, transparent membrane, which is still seen. The valves on the cardiac side are tolerably smooth, but on the aortic side they are very rough, one of the leaflets supporting a vegetation ten millimetres long. One of the segments of the valves is adherent to the inner coat of the aorta for about half an inch in extent, the free end of the valve being folded upon itself, and pointing towards the nearly closed aortic orifice. After macerating the specimen in water for forty-eight hours, the diseased valves still remain inflexible.

DRS. FORMAD, DUNN, GRIFFITH, and EDWARDS reported having similar or nearly similar cases.

DRS. TYSON and NANCREDE called in question the correctness of calling the disease *ossification* of the valves, as it was in reality a *calcification*.

DR. SHAKESPEARE concurred in this view, and thought that ossification, rarely, if ever, occurred in this situation.

DR. ESKRIDGE said that Hayden [2] referred to bony deposits in the aorta and its valves as follows: Sir Dominic Corrigan exhibited before the Pathological Society of Dublin [3] the heart of a young woman, in which the root of the aorta had undergone complete osteoid transformation; it was likewise greatly dilated, and the aortic valves had been rendered thereby inadequate. During the patient's last illness a systolic murmur of metallic quality, appropriately designated a "trumpet bruit," was audible at the base, and in the ascending aorta and carotid arteries; there was likewise a soft diastolic murmur. He regards a "trumpet bruit" as absolutely diagnostic of bony deposit in the aorta, either in the form of a "rim of bone" or a "projection or tongue of bone." In the same paragraph Corrigan refers to Dr. Banks's specimen of a "tongue of bone" projecting into the aortic orifice.

REPORTS OF THE COMMITTEE ON MORBID GROWTHS.

"A section of the growth presented by DR. NANCREDE for Dr. Seltzer on microscopical examination is shown to consist of an external covering formed of the histological elements and arrangement as found in the skin; the papillæ were in places much atrophied and flattened, also in some parts elongated. There were no hair follicles, sweat or sebaceous glands in the section. Below the papillæ was seen fibrous tissue, at some points in an active state of proliferation, and numerous blood-vessels. The growth is a fibrous polypus."

"A microscopic examination of a section made from the growth removed from the uterus, and presented by DR. PARISH, December 28, 1883, shows it to be adenomatous in structure, consisting of small cavities or spaces lined with cells, which cavities are separated from one another by fibrillar connective tissue."

"A section of the lymphatic gland presented by DR. PARISH, December 28, 1882, shows that its normal structure is metamorphosed into that of a carcinomatous nature, consisting of an alveolar fibrous stroma having the spaces filled with cells of an epithelioma-tous type."

Report on Dr. Eskridge's specimen of brain, lung, liver, spleen, kidney, and bladder troubles, presented November 9, 1882: "A section made from one of the nodules of the liver presented by DR. ESKRIDGE, examined microscopically, shows it to be a new formation consisting of epithelial cells placed in alveolar spaces; the tissue forming the alveolar walls being fibrillar connective tissue. The cells in the spaces at the periphery of the groups, and lying next to the alveolar walls, have a columnar shape, and are quite regularly arranged, while those of the centre are flat or squamous epithelial cells. The neoplasms are cylindrical-celled epithelioma. The post-mortem changes undergone by the brain were such as to prevent any satisfactory histological examination being made."

[1] Concluded from page 302.

[2] Diseases of the Heart and Aorta, vol. ii., p. 839.

[3] See Proceedings, vol. ii., New Series February, 1864.

A TUMOR COMPOSED OF MILIARY TUBERCLES OF THE SUBCUTANEOUS ADIPOSE TISSUE CONNECTED WITH ONE OF THE ANTERIOR CUTANEOUS BRANCHES OF THE LUMBAR NERVES.

Exhibited by Dr. Nancrede.

The patient from whom this truly unique tumor was removed was a young girl of eighteen years of age, who for four years past had had occasional coughs with, at times, some bloody expectoration, but was able to attend to her occupation of housework. Her family history was not characteristic in any way. About one year since she thought that she "strained herself," since when she has been subject to severe attacks of abdominal pain, which extend to various portions of her body. She was admitted to the female medical wards of the Episcopal Hospital last fall, where dullness on percussion and harsh respiration at the apex of one of the lungs was detected. During December, 1882, the pains increased, and the right thigh became flexed upon the abdomen. A small, exquisitely sensitive, nodulated tumor was now detected just to the outer side of the right rectus abdominis. Dr. Morris J. Lewis, by whose kindness I am enabled to present this specimen, then asked me to see the case with him. Under ether I found a nodulated mass beneath but attached to the skin, and freely movable upon the deeper parts. I then thought that the growth was one of the ordinary so-called neuromata, that is, usually fibrous growths in connection with some nerve, and that the pains were reflex, as was also the flexion of the thigh. February 20, 1883, I accordingly removed the growth, which to my surprise was markedly infiltrated, and only at one spot in any sense encapsulated, where it evidently had developed around a small cutaneous nerve and artery. The wound did badly, and has left an indolent ulcer, *but all the reflex pains and flexion of the thigh have disappeared*, while the lung is breaking down, yet the patient is gaining flesh, and looks and expresses herself as much better, and thoroughly satisfied with the results of the operation. I have termed this growth "unique" because I believe that none such have been reported, that is, subcutaneous masses of tubercle large enough to require the surgeon's knife, and liable to be mistaken for other neoplasms. The present growth was about an inch in its various diameters as far as could be estimated. Microscopically sections show fibrous and adenoid tissue with giant cells, according to the kind report of my friend, Professor Simes, whose observations have been confirmed by Dr. Formad and other pathologists as well as by myself.

Dr. G. G. Davis said that he had seen a somewhat related case in the clinic of Professor König, of Gottingen. A young man had a subcutaneous tumor just above and to the outer side of the patella. It was about one inch and a quarter in diameter, and perfectly circumscribed. It and a portion of the joint capsule, including the part to which it was attached, were excised antiseptically. On the synovial membrane were found a number of what appeared to be miliary tubercles. There were no other evidences of tubercular disease, and he recovered with a good, movable joint. Professor König regarded the case as one of true localized tuberculosis. He examined the excised portion microscopically. The tumor was hard, but had undergone cheesy degeneration.

Dr. Nancrede thought that this interesting case related by Dr. Davis still left his own unique, as Professor König's case evidently had its origin from the synovial membrane, which was so closely related to the other serous membranes, which, as is well known, are so very prone to miliary tuberculosis.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

The paper of the evening at the meeting of March 26th entitled

CATARRHAL HEADACHES AND ALLIED AFFECTIONS,

was read by Dr. R. C. Brandeis. The nose, he said, on account of its threefold function, as well as its relations to the general system, was an organ of great importance. Smell and respiration it was generally regarded to be chiefly concerned in, but scarcely less was this the case with the voice, which was dependent, to a great extent, on the condition of the nasal cavities. Furthermore, the nose was in direct communication with almost all the bones of the skull. Of its two portions the external and prominent one had but little to do with the subject of the paper, the two nasal fossæ constituting alone the parts that were to be studied in this connection. Dr. Brandeis here gave a minute description of the anatomy and anatomical relations of the nasal fossæ, illustrated by means of specimens and plates, and then went on to speak of the effect of acute coryza in causing headache. In the first stage of inflammation of the pituitary membrane the connection with the frontal sinuses was apt to be occluded, and intense frontal headache might result. As soon as the flow of mucus commenced, however, an amelioration of the pain generally followed, and the suffering gradually disappeared. The case was then related of a young man who had had repeated attacks of acute coryza. When he consulted Dr. Brandeis there was great obstruction of the nasal passages, and the pain resulting was so intense that he was completely prostrated in consequence. The whole forehead, which, it was incidentally noticed, was of unusual prominence, was quite sensitive to the touch, while the nasal mucous membrane was found to be very dry. He was directed to make use every hour of a few drops of Hegar's fluid, which is composed as follows: —

℞	Carbolic acid	f℥i.
	Alcohol	f℥iij.
	Strong aqua ammoniæ	f℥i.
	Water	f℥ij.

When seen the next morning he was much relieved, all sense of constriction having passed away, and the patency of the canals was found to be normal Since then the patient had had a number of similar attacks, but he had always been able to relieve himself promptly by means of the remedy prescribed at that time.

Chronic catarrhal rhinitis was also not infrequently accompanied by more or less frontal headache, the frontal sinuses being affected from the fact that disease of one cavity almost necessarily spreads to the other through consecutive inflammatory action. The frontal cavities were, indeed, more frequently affected than any others in connection with the nose, with the exception of the antrum of Highmore, and he had known of a number of cases of continued severe headache which were only cured after the nasal cavities had been restored to their normal condition. An account of one of these was given.

A lady had been for ten years the subject of frontal headache, scarcely a day occurring in that period when she was free from it. During wet weather she generally had exacerbations of the pain, which sometimes occurred in very severe paroxysms, and she had tried all sorts of treatment without any permanent relief. On making an examination he found that there was marked thickening of the entire pituitary membrane and a considerable hypertrophy of the turbinated bones, and that pressure over the frontal sinuses was accompanied by some pain. Under these circumstances he advised the removal of the hypertrophied tissue of the turbinated bones, and as the patient refused to submit to any operative procedure whatever he simply cleansed the nasal cavities and ordered the use of Hegar's fluid. No relief of the headache having been secured by this means, however, he again cleansed the passages, and then practiced insufflation through the middle meatus on both sides with a German sternutatory powder. The patient at once began to sneeze violently, the sneezing not being attended with pain, and was soon followed by a profuse discharge of mucus from the nose. Now for the first time the headache was relieved, and in three days he noticed a decided diminution of the pituitary thickening. At intervals of three days the same treatment was repeated, the headache in the meanwhile growing less and less troublesome, and when he last saw her she had been for two months entirely free from headache, as well as from nasal obstruction.

There were many instances, however, in which the hypertrophy of the turbinated bones was so great that operative measures were imperatively demanded, and Dr. Brandeis next related a case illustrating this point. A gentleman was affected with chronic conjunctivitis, and afterwards upon this supervened nasal catarrh, accompanied with headache. When he first consulted him he found much nasal obstruction; the turbinated bones being greatly hypertrophied and the septum of the nose deviated. There was a total absence of the sense of smell, and the voice was that characteristic of nasal obstruction. The turbinated bones were covered with a thick layer of creamy pus, and a profuse discharge of pus from both nasal fossæ accompanied a paroxysm of pain, which came on every afternoon and lasted the greater part of the night. The hypertrophied tissue of the turbinated bones was removed in three sittings by means of the galvano-cautery snare. Afterwards the nasal cavity was kept well cleansed, and when the connection between the nasal and frontal fossæ had been restored all trouble disappeared. Dr. Brandeis could not say whether the paroxysmal neuralgia was dependent on direct pressure upon the nerves or was reflex in its character; but he thought there could be no doubt that all the symptoms were dependent on the nasal affection. The conjunctivitis disappeared spontaneously.

Affections of the deeper parts, such as the ethmoid and sphenoidal sinuses, he went on to say, might give rise to disease of the brain and meninges. There was a direct communication between the nasal and the cerebro-spinal cavities.

He next related the case of a gentleman from Chicago, who had consulted Dr. Jewell for continued headache referred to the base of brain and occiput. Dr. Jewell, suspecting that the symptoms were really dependent on some trouble in the nasal passages, sent him to the specialists in diseases of the throat and nose, and he finally came under the care of Dr. Brandeis, who found that the post-nasal space on both sides was absolutely filled with polypoid growths. These were removed in part by the galvano-cautery, and it took several weeks to get rid of them all. The polypi together filled a one ounce vial. As the patency of the passages became restored the patient was gradually relieved, and finally was completely cured.

Of all the cavities connected with the nose, the antrum of Highmore was the one most subject to disease, on account of its peculiar pendulous position on both sides of the nasal fossæ, inflammation being transmitted through the foramina. In the healthy state, the secretion of the part was not greater than could be absorbed by the lymphatics; but in disease this secretion was much increased. Hence great pain might be caused, not only by the inflammation, but also by the weight of the column of fluid. In disease of the antrum Dr. Brandeis recommended the extraction of the second upper molar tooth and the trephining of the alveolus, and he then gave the history of a case in point. In conclusion, he expressed the hope that the remarks that he had made and the cases that he had given would show the necessity of making an examination of the nasal cavities in all cases of neuralgia, headache, etc., which could not be traced to other sources, or did not yield to the ordinary methods of treatment.

Dr. H. KNAPP remarked that there were two conditions of the frontal sinuses in which headache was present: first, in acute catarrhal affections; and, second, when the disease went to the brain. He had known of a lady who suffered for years from intense headache without apparent cause. At length he was called upon to incise an abscess opening into the roof of the orbit. He thought it was only of periosteal origin; but as there was no improvement in her condition afterwards, Dr. Seguin was consulted, and he made the diagnosis of abscess in the frontal lobe of the brain, which was presently confirmed by an autopsy. He had seen the frontal sinuses full of sero-purulent fluid, polyps, etc., for years, but all without pain unless the condition present was connected with disease of the brain. On motion, the further discussion of the paper was then postponed until the next meeting, in order that the election of delegates might take place.

THE DEATH OF DR. BEARD.

While the ballots were being counted by the tellers, DR. A. D. ROCKWELL presented the following resolutions in regard to the late Dr. George M. Beard: —

Resolved, That in the death of Dr. George M. Beard this Society and the profession at large have lost one of their most brilliant, earnest, and active members. As an investigator he was original and conscientious. As a friend he was generous and steadfast. Exposed by his restless activity to many and peculiar attacks, he ever manifested the utmost charity and good humor. Of his worst enemies he seldom spoke a harsh, and never a vindictive, word.

Resolved, That to his child, in one short week an orphan, by the added affliction of a mother's death, and to his other relatives, we tender our heartfelt sympathy.

"In presenting these resolutions, Mr. Chairman," Dr. Rockwell remarked, "I will simply add that having been associated with Dr. Beard for many years in a peculiarly close and intimate relationship, it was my fortune to know him, perhaps, better than most others.

His self-poise was something remarkable. As a foil, so to speak, to the many attacks that followed his original investigations, and his position and independent methods of expression, he seemed to live, and move, and have his being in humor. His powers were of the most versatile sort. His readiness and originality as a scientific writer are well known, but it is not so well understood that he had a genius for an entirely different style of literary work. While a very young man, serving during the late war in the Gulf Squadron, and merely to give vent to his own restless mind, he penned a work of fiction which gave evidence of no mean talents in that direction, and since his death a sort of autobiographical sketch has come to light, which, for its quaint humor, its keen estimates of character and motives, and its philosophical insight, is unsurpassed. I could say much in regard to his individuality, through which ran so rich a vein, and which was in many respects as unique and remarkable as any I have ever known or read of, but I forbear, and content myself with the brief but just tribute embodied in the resolutions."

DRS. D. B. ST. JOHN ROOSA and W. M. CARPENTER also spoke in eulogy of Dr. Beard. The latter said that there were three classes of workers in the profession: first, those who simply plodded on in the well-worn grooves of medical practice; second, those who now and again accomplished something in making the old ways a little less crooked or a little smoother; and third, those who struck out for themselves entirely new and untrodden paths. Dr. Beard had undoubtedly won for himself a deservedly high position in this latter class. In speaking of his eager and unquenchable desire for the advance of science Dr. Carpenter alluded to the fact that one of the last wishes that he expressed upon his death bed was that some one should take up his work at the point at which he had left it off; and also that on the very brink of dissolution he spoke of his regret that it was impossible for him to communicate the sensations of a dying man.

BOSTON MEDICO-PSYCHOLOGICAL SOCIETY.

WALTER CHANNING, M. D., SECRETARY.

THE Society held its nineteenth regular meeting on the evening of February 8th, DR. G. F. JELLY occupying the chair.

DR. J. B. AYER read the paper of the evening, entitled

THE TREATMENT OF DELIRIUM TREMENS,

of which the following is a summary: —

Grünfeld states that the study of delirium tremens has been neglected, the disease being considered so well marked and uniform as to require no special treatment, while the truth is the best authorities differ widely in describing symptoms and in directing treatment.

Many physicians confess with Verneuil that they have tried a great variety of agents in the treatment of delirium tremens, without being able to form any opinion of value in regard to their merits.

Knowing that delirium tremens is alcoholic poisoning of the blood and nervous system, the old-fashioned practice (based upon the theory of congestion) of venesection, extensive leeching, large doses of calomel, drastic purging, and low diet, must be condemned *in toto*.

Heroic treatment by opium or digitalis I would not recommend; but moderate doses of morphia (one quarter grain repeated once in three hours), in connection with other sedatives, I have used with advantage — also tincture digitalis in small doses when the heart's action was feeble.

I would agree with Murchison in examining the urine of alcoholic patient's before giving opium, believing that albumen in the urine contra-indicates its use.

Hyoscyamia, though recommended as a rapid and reliable sedative in delirium tremens, I have not tried, having been disappointed in its effect in maniacal excitement in one hundredth to one fortieth grain doses; but hyoscyamus is undoubtedly of value in the treatment of the disease in the form of tincture or fluid extract.

The alternate use of chloral and bromides is, I believe, the most efficacious treatment in the majority of cases of delirium tremens.

Unless the pulse is weak or heart trouble exists (in which cases I would not give chloral) I would agree with Balfour that ninety grains can be safely kept in the system of an adult, seven grains being eliminated hourly, *provided the patient is closely watched.*

At first I give both chloral and bromides hourly (one half hour between), the bromide (either bromide of potash alone or with ammonium and sodium) being protected against depressing effect by capsicum or fluid extract of coca.

In a recent case I gave *in five hours* 95 grains of chloral (five doses), and 170 grains of bromide of potash (five doses); *in twelve hours* 170 grains of chloral (nine doses), and 250 grains of bromide (ten doses); in twenty-eight hours (at end of which time patient slept) 230 grains of chloral (twelve doses), and 360 grains of bromide (eleven doses).

A recent case yielded to bromide of potash (300 grains), combined with coca *without chloral*, in twenty hours.

I give one to two ounces of the fluid extract of coca in twenty-four hours. The combination of coca with bromide rarely nauseates and is not often objected to. It acts as a good substitute for alcohol and guards against the weakening effect of bromide.

I would move the bowels early, and would advise sponge-bathing and massage while the excitement continues.

It is advisable to use as little restraint as possible. I would not insist upon darkening the room.

I would not try too hard to produce sleep, being satisfied if it comes between twelve and thirty hours. The quieted state produced by the chloral and bromide treatment is of nearly as great curative value as sleep itself.

Alcohol should not be administered in the treatment of delirium tremens unless the patient is much debilitated. In most cases it is well to cut off stimulants from the outset, substituting strong beef tea and other liquid diet at frequent intervals.

In the discussion which followed the reading of the paper DR. DENNY mentioned a severe case of delirium tremens ending fatally, which he had seen at the Marine Hospital, as early as 1863, treated with half ounce doses of digitalis. In the fatal cases he had seen there had been prolonged sleeplessness. He used capsicum in large doses, often in the form of boluses and chloral

in quantity sufficient to produce sleep. Combined with them he used in some cases hot baths and beef juice, with considerable pepper soon after. When the delirium starts up suddenly in connection with some other disease, other treatment may be necessary. Most of the cases he had seen at the City Hospital had recovered.

He had seen benefit from vapor-baths. Coca he thought good in cases of exhaustion, but he should hesitate to use it on account of its producing sleeplessness. He mentioned the case of a man with the hallucination of delirium tremens, who was able to walk straight through the streets, yet could not find his way home. He was in a state somewhat like what might be called epileptic somnambulism. It was interesting to study delirium tremens on account of the varieties of paralysis brought about by it.

DR. H. R. STEDMAN said that the cases that were received at the Danvers Insane Hospital with which he was connected were usually admitted late in the attack. The subjects of the disease recovered under seclusion, sedatives, and feeding. He mentioned the case of a man at the Danvers Hospital who went on a spree on the 4th of July, of a few days. This was followed by delusions and hallucinations, and now he had gone into dementia, and would probably not recover. He had tried coca in a number of cases of acute dementia, melancholia, and the later stages of general paralysis. He had only seen benefit from its use in one case, but thought it might be of service in the exhaustion of delirium tremens.

DR. COWLES said that when he was stationed at Fort Independence after the war he had seen a number of severe cases of delirium tremens among old soldiers. With digitalis, opium, etc., he had bad results; but after the introduction of bromide and chloral, at a later period, he had had uniformly good results.

DR. TUTTLE spoke of the use of digitalis at the City Hospital. It was used in severe cases with a quick and weak pulse, after milk had been taken. The successful treatment he had seen was with the bromides and chloral.

DR. CHANNING was surprised at the small dose of hyosciamine that the reader mentioned. He had used Merck's crystals in one sixteenth grain doses. The patient became much flushed and excited after the first dose, with quick, irregular pulse. A second dose produced sleep. This was followed by great exhaustion for several days, and he felt the drug had done harm, rather than good. He should hesitate before using it again.

DR. JELLY said that Dr. Gray had mentioned the use of hyosciamine in delirium tremens. He regarded it as a dangerous remedy and should be very cautious in its use. He spoke of cases he saw which seemed to be delirium tremens, but were difficult to classify where there was no clear history of the use of alcohol. These patients had a dry skin, rapid pulse, incoherence of speech, and a pasty tongue, but usually no hallucination. After a few days' observation a positive diagnosis could be made. About three in twenty, he thought, developed into mania or melancholia.

DR. AYER asked the Society if it favored the removal of all stimulants at once from the drunkard. He thought there was a craving among all nations for some stimulant. Perhaps opium might sometimes be substituted for alcohol.

DR. DENNY thought it very important for society in general to consider the importance of dispensing entirely with the use of alcohol, as it was certain to materially influence the health of future generations.

The discussion not being carried further, the meeting adjourned.

PROCEEDINGS OF THE MONTHLY PHARMACEUTICAL MEETING OF THE MASSACHUSETTS COLLEGE OF PHARMACY.

B. F. DAVENPORT, M. D., REGISTRAR.

THE NEW PHARMACOPŒIA.

AT the regular monthly meeting of March 13, 1883, the seriatim discussion of each article in the new revision of the U. S. Pharmacopœia was continued, eliciting much interesting and useful information for those present.

PRESCRIPTION OF READY-MADE IDENTICAL SPECIALTIES.

After some little discussion of the late action in the same direction that had been taken in New York and elsewhere, the New York College of Pharmacy having appointed a committee to act with the New York Deutscher Apotheker-Verein to try to dissuade physicians from prescribing ready-made identical specialties of different rival manufacturers, and requesting them to omit the name of the manufacturer of all such articles, as they can just as well be made by any competent pharmacist, the following vote was taken: —

Whereas, It has become a burden to the pharmacist to be obliged to keep in stock the many different makes of the same pharmaceutical preparation,

Resolved, That it is the sense of this meeting that in justice to pharmacists physicians should (except in very special cases) leave it to the judgment of the pharmacist to dispense any such make as he, the pharmacist, is able to guarantee.

Recent Literature.

Pestilentia in Nummis: Geschichte der Grossenvolkskrankheiten in Numismatischen Documenten. Ein Beitrag zur Geschichte der Medicin und der Culten. Von DR. L. PFEIFFER und C. RULAND, mit zwei tafeln abbildungen in lichtdruck. Tübingen. 1882. Verlag der H. Laupp'schen Buchhandlung.

This is an attempt to illustrate and supplement the history of the great epidemics at different periods by the aid of coins and medals struck in commemoration of them at the time of their occurrence, which are here described. Some of the most interesting of these mementoes are reproduced by the aid of photography. The book is a curious one, and has evidently been a labor of love — and not altogether a lost one — with its authors.

An Index of the Practice of Medicine. By WESLEY M. CARPENTER, M. D. New York: William Wood & Co. 1883.

This is a pocket-book designed as an aid to the study and practice of medicine. It aims at giving in a very concise form the synonyms, definition, ætiology, symptoms, differential diagnosis, and treatment of the dis-

eases usually encountered in practice in the United States, the diseases being arranged in alphabetical order. Frequent blank leaves for notes are interspersed among the pages. It will be found well adapted to its purpose by those requiring a book of this kind.

Medical and Surgical Journal.

THURSDAY, APRIL 5, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

ELECTION OF DELEGATES IN FAVOR OF THE OLD CODE OF ETHICS TO THE NEW YORK STATE MEDICAL SOCIETY.

AT a stated meeting of the New York County Society held March 26th, an election of three delegates to the State Medical Society was held. This was to fill the vacancies made by the resignations of Drs. Alfred C. Post, David Webster, and Lawrence Johnson, who had been elected permanent members of the State Society. Great interest was felt in the election, as it was known that it was to be contested squarely on the issue whether or not the old code of medical ethics should be restored at the next meeting of the Society at Albany. Both sides, therefore, mustered their forces in as great strength as possible. The "old code" candidates, who, as Dr. Austin Flint, Jr., remarked, when he proposed their nomination, were "sure to stand up for the code of the American Medical Association first, last, and all the time," were Drs. Charles Hitchcock, Charles S. Ward, and Charles A. Leale, and the "new code" nominees were Drs. Walter R. Gillette, Frances L. Weld, and P. Albert Morrow. The result showed that there were in all 164 votes cast, and that the "old code" delegates were elected by a majority of over twenty; which is nearly four times the majority by which it was decided to retain the new code of ethics at the late meeting of the State Society at Albany. The County Medical Society has now, therefore, in some measure redeemed itself in the eyes of the profession at large.

Under the auspices of the general or State "Association for Upholding the National Code of Medical Ethics," (of the executive committee of which Dr. S. S. Purple, lately president of the Academy of Medicine, is chairman, Dr. John H. Hinton, recording secretary, and Dr. J. W. S. Gouley, corresponding secretary,) branch associations are being organized in the various counties throughout the State, and the happy results achieved at this meeting of the County Medical Society were no doubt largely due to the active exertions of the New York County Association. The executive committee of this Association consists of Drs. Charles McBurney, R. H. Derby, Charles S. Bull, James B. Hunter, W. T. Bull, Charles S. Ward, J. W. S. Gouley, Henry D. Nicoll, W. T. Lusk, and Charles Hitchcock. The result of the above election shows plainly the advantages of organized effort; and up to the present time all the organization has been on the side of the new code.

THE MEDICAL AND SURGICAL HISTORY OF THE WAR OF THE REBELLION. PART III. OF VOLUME II.

WE have lately received Part III. of vol. ii. of the Medical and Surgical History of the War of the Rebellion. With this, the third surgical volume, the surgical history is complete. The treatment of regional injuries of gun-shot origin is continued, and those of the lower extremities are taken up and thoroughly discussed. Miscellaneous injuries, not strictly gun-shot in character, but incident to the military status, form the subject of the next chapter. Then follows a chapter on wounds and complications, which includes facts of general interest and of statistical value relative to wounds; to the nature, peculiarities, and effects of missiles and projectiles; to conditions affecting the course and results of wounds, with special reference to the graver complications of secondary hæmorrhage, erysipelas, pyæmia, gangrene, and tetanus; and, finally, a condensed summary of operations and treatment.

A separate chapter is devoted to anæsthetics, with reference to their use in the army. Another chapter is occupied by a brief historical sketch of the medical staff, and in the last chapter (xv.) the methods of field, railway, and water transportation of the wounded are detailed.

The volume was begun under the supervision of Surgeon George A. Otis, and after his lamented death was carried on and completed under the direction of Surgeon D. L. Huntington. It is extremely interesting and valuable, and in every way worthy of its predecessors. It contains a very large number of handsome chromo-lithographs and of faithful photographs and cuts, which add very much to its value.

This series of volumes is really a great credit to the Surgeon-General's Department, to the army surgeons, and to a government which authorizes and provides for its publication, and it is a great pleasure to be able to praise it so heartily. We reserve a more detailed and critical notice for a subsequent number of the JOURNAL.

— A paragraph is going the rounds to the effect that Mlle. Bernard, the daughter of Claude Bernard, has been fined at Boulogne-sur-Seine, on complaint of her neighbors, for converting her courtyard, garden, parlor, and bedroom, into a kennel for destitute dogs. She felt some reparation was due the canine race for the miseries inflicted on it by her father's vivisections.

THE INDEX MEDICUS.

If it had been told us but a few years ago that the investment of a few dollars would give us the opportunity to see an index of all the medical articles of the leading medical journals of the world, together with a catalogue of the books, carefully classified and published every month, it would have seemed too good to be true. We possess the *Index Medicus* — it is all one could expect from a journal of its character, but, alas, our joy in its possession is tinctured by the constant fear of its loss. We have spoken of it often before. The publisher, Mr. Leypoldt, publishes his list of subscribers with the prospectus. It furnishes rather interesting reading for an odd moment. In general one may say that if a man has made himself known for appreciation of good work at the hands of others in the profession his name is pretty sure to be on the list. We do not know that the list will be published again next year; if it is we hope it will be larger; it ought to increase very greatly.

MEDICAL NOTES.

— A case is reported (*Journal de Médécine et de Chirurgie*, March, 1883), of a man who was shot in the breast with a charge of number six shot. He survived the accident four hours and a quarter and it was found, post mortem, that one of the 113 shot which had taken effect in his body had penetrated the anterior wall of the heart and had passed into the left ventricle, whence it seems to have been carried away by the circulation, as there was no wound indicating its exit from that cavity. The remarkable prolongation of life, especially in view of the numerous other wounds of the pleura, etc., was probably due to the small size of the track through the heart wall.

— The surgeons of Melbourne are using for ligatures and sutures tendons from the tail of the kangaroo, which they find stronger and more durable than catgut.

— Dr. S. Weir Mitchell has recently published a volume of poems, and a contemporary (which, by the way we do not recollect to have been especially devoted to the muse,) modestly "welcomes another medical man into the ranks of poesy."

— A contemporary publishes the description taken from the United States Patent Office Records, of a "tape-worm trap," patented November 17, 1854. It consists essentially of a small gold cylinder, with an orifice in the side through which the worm is supposed to reach for the bait, for which he has been made voracious by several days' fasting on the part of his host. The introduction of the head of the worm is supposed to release a toothed spring which is brought up under the chin of the beast, and the trap is then withdrawn with the prey by means of a string attached to the top of the cylinder. The patentee is a physician, who claims to have successfully operated by means of his invention in the way described. The apparatus is figured in the *New York Medical Record* for March 31, which date is evidently one day too early.

— The *British Medical Journal* (March 10th) reports a case in which a boy, aged thirteen, was shot with a revolver by a playmate at three yards' distance. The ball passed through the upper lip, knocked out one canine and one incisor tooth, completely traversed the tongue, and disappeared, making no wound on the posterior wall of the pharynx. Six days afterwards it was passed per anum. No troublesome symptoms occurred. The bullet was grooved, probably by the teeth in its passage, and its force thereby checked.

— A member of the French Assembly has recently, in view of statistics which show the slow depopulation of France, by excess of deaths over births, submitted a bill for the encouragement of large families. It proposes a reduction of fifteen per cent. on the taxes of a father with five children, and a further five per cent. for each additional child. Persons not paying direct taxes, or whose taxes do not exceed one hundred francs, are likewise to be tempted by a bonus of two hundred francs for a fifth child, three hundred francs for a sixth, and so on. For this bill is predicted what the French call *un succès de rire*.

— Grave-digging would seem to be a tolerably healthy occupation, as a negro known as "Louis, the grave-digger," who has been engaged in it for more than seventy years, was recently married at Yonkers, to a mulatto girl twenty-three years old, at the age of one hundred and twelve, according to his own reckoning.

— The *Medical News* finds that an analysis of eighty-four samples of colored paper supplied by a Massachusetts firm for the use of kindergarten pupils shows arsenic to be present to a considerable extent in a large number of the papers, and in eight of the specimens to a dangerous degree. These strips of paper are used by the children in weaving various designs, and of course this work is a most natural occasion for the use of nature's mucilage, the saliva. The manufacturer, indeed, calls attention to the fact that the most attractive colors contain arsenic, — cannot, indeed, be made without it, but suggests that there is no danger if the children be taught to work with their mouths shut! Even if a child could be taught to overcome its nature enough to keep things out of its mouth, while it might in a measure diminish the risks from lead and other poisons used in these same papers, it is hardly necessary to say that it would be far from removing the exposure to arsenical poisoning.

— According to the *British Medical Journal* a proposal to erect a building to contain about eighty sets of residential rooms, a dining hall, smoking room, and committee rooms, for the use of the students at the London Hospital, is under serious consideration. The plans have been prepared, and are now awaiting approval. The money necessary to carry through the undertaking is to be raised on the principle of limited liability among the friends and the medical staff of the hospital. The editor remarks, "The scheme seems to be in every way worthy of praise, and ought to be a great boon to the students. Nothing, we believe, will more tend to raise the tone of

student life than the multiplication of such residences. At the present time, with the exception of the College at St. Bartholomew's Hospital, and University Hall in connection with University College, both absurdly inadequate to the calls made upon them, there are no residences provided for medical students in London, who, on first coming up to town, are thrown on their own resources to drive such bargains with the lodging-house harpies as their inexperience may allow. Were every medical school provided with a well-planned building, where the sanitary arrangements were good, and the rents and other charges moderate, students would eagerly occupy all the rooms, to the advantage of their health, their morals, and their social position, and to the certain cultivation of more studious habits."

— A writer in the *British Medical Journal* claims that powder of capsicum, two drachms to the ounce of prepared lard, rendered elegant by the addition of one of the essential oils, has been, in his experience, a seldom-failing local application in subacute and chronic forms of rheumatism. It must be rubbed over the affected part for ten minutes by a gloved hand, and the application of dry heat intensifies the rubefacient action, which continues for a considerable time afterwards, being even somewhat revived by heat or walking. It is to be used freely night and morning, or at bed-time only (in lumbago, for example, the first thorough application often gives marked relief), according to the effect produced on the sensibility of the patient and on his disease.

— A case is awaiting judicial decision in Washington, wherein a practicing dentist claims exemption from jury duty on the ground of being a surgeon; the ground taken being that not all dentists are necessarily surgeons, but that the holder of a diploma from a recognized dental college is entitled to the same exemption from jury service as a doctor of medicine.

— In *Lyon Medicale*, February 11th, it is stated that in order to prevent the diffusion of the products of decomposition of human bodies in the air and water, Dr. A. Meyer proposes to substitute glass coffins for those made of wood. They will be opaque, very thick, and formed only of two parts, hermetically closed by a silicated mastic as indestructible as the glass itself. By suitable pressure an anti-putrescent gaseous atmosphere (carbonic acid, for example) may be introduced into the coffin, and preserve the corpse from putrefaction during an indefinite period of time. Dr. Meyer adds that these coffins can be readily supplied by the trade at prices which will more and more approximate to those paid for wooden coffins.

— According to *The Sanitarian*, a novel suit, which will test the responsibility of the Brooklyn city authorities to allow water in a pump-well to become "stagnant, impure, poisonous, unclean, and dangerous to human life and health," is pending trial in the supreme court of that city. The plaintiff is John Danaher, a resident of DeKalb Avenue, who sues to recover $10,000 for the loss of his sons, Charles M., aged six years, and Thomas P. Danaher, eleven years, whose deaths were, it is alleged, caused by drinking impure water from a well near the plaintiff's residence. The complainant alleges that the city has charge of the wells, and therefore should prohibit nuisances in them, and preserve the public health.

NEW YORK.

— The Demilt Dispensary has commenced the experiment of opening its doors once a week in the evening for the treatment of working women and girls residing within the dispensary district. No other class of patients is permitted to attend at this hour.

— The commencement exercises of the Columbia Veterinary College were held at Chickering Hall, March 29th. The degree of Doctor of Veterinary Science was conferred upon twenty-five graduates by Dr. Alexander Hadden, and eleven students were awarded junior certificates by Dr. Bates, dean of the college. The presentation of prizes was made by Dr. Hubbard W. Mitchell, the address to the graduating class by Judge Cowing, and the valedictory by Henry C. Slee.

— The annual dinner of the New York College of Pharmacy took place at Delmonico's, March 27th, when the usual toasts were made. "The City of New York," was responded to by the Hon. Roswell P. Flower, M. C. Mr. Seabury spoke in behalf of the necessity of a pharmacy act, and said that it was only a few months ago that the most arrogant assault yet made on the legitimate operations of the druggists and pharmacists was perpetrated by a prominent grocery firm, who sheltered themselves under the deceptive disguise of "anti-monopoly."

— From the report of Dr. H. Knapp, surgeon to the New York Ophthalmic and Aural Institute, published in the thirteenth annual report of the institution, it appears that 554 operations were performed there during the year 1882. Ninety-seven eyes were operated on for cataract — eighty-two by extraction and fifteen by division. Two eyes were lost, a few regained moderate, and the vast majority good, sight. In eighty cases of extraction by Graefe's method modified, the result was good in seventy-three, moderate in five, and failure in two. There was one linear extraction of soft cataract, in which the result was good, and one extraction of a lens dislocated into the anterior chamber, in which moderate sight was regained. There were eight cases of division of soft cataract, two of traumatic cataract, two of congenital cataract, three of zonular cataract, and also fifty-five of secondary cataract; in all of which the result was good. The school of ophthalmology and otology has been carried on as in previous years, except that some modifications have been introduced to suit such students as desired to familiarize themselves with the diagnosis and treatment of eye and ear diseases, without intending to devote their attention exclusively to these branches.

— The police commissioners have sent a letter to the mayor and corporation counsel, urging immediate legislation on the subject of sick pay to patrolmen. By a recent decision in the case of one of the force, who carried the matter into the courts, no deduction can now be made, as heretofore, from the salary of policemen absent from duty in consequence of sick-

ness; and since this decision has been rendered it is said that there has been an astonishing increase of illness among the men.

— Under the auspices of the State Charities Aid Society, a large number of courses on First Aid to the Injured are now being given by physicians in all parts of the city, not only to private classes, but also to policemen, railroad hands, and other working men.

Correspondence.

CONCERNING NEWPORT AS A HEALTH RESORT FOR CONSUMPTIVES.

MR. EDITOR, — Dr. Horatio R. Storer's answer to my letter on the above subject, printed in your journal of March 22d, should not pass unchallenged for two reasons: (1.) Because in taking up each constituent of climate in turn, and showing that Newport possessed not one of the requirements for a suitable climate for consumptives, I established facts which Dr. Storer did not attempt to controvert. (2.) Because even a mild laudation of a "fair winter climate," published in a prominent journal from the universally respected pen of Dr. Storer, leads to far-reaching mischief in inducing persons in all stages of consumption to seek restoration at Newport when they should go elsewhere. This latter fact was proven in the case of the book (now happily out of print), Wilderness Cure, by MacCook, who himself died shortly after its publication.

In order to be brief let me again say: —

That the undersigned is not a "dry extremist."

That Dr. Storer's belief in the efficacy of "local climate" and "presumably good climate" (the ocean climate, for instance), notwithstanding the constituents of climate which determine its character, and from which arise all others (sunshine, electricity, etc.), are the barometric, hygrometric, and thermometric *fluctuations* and their mutual interdependence, and not the thermometrical *sensations*.

That the utility of these three constituents for therapeutic purposes is expressed in the terms elevation, dryness, and equability, reigning temperature being a mere accompaniment expressive of sensations conveyed to us.

That the ideal climate for vulnerable individuals, of whom consumptive candidates form a large contingent, is to be found where these three elements of elevation, dryness, and equability are combined, as is the case in some parts of the Andes, in South America.

That this statement requires the proof, first, of practical results; second, of experimental demonstration of the effect of these factors. In order to save space a list of authors and their writings might be appended, whose opinions Dr. Storer, however, is familiar with, and needs only to have recalled to mind.

That climates in which altitude (lessened barometric pressure) and climates in which dryness below fifty-five per cent. of saturation, and climates in which both are combined, have results to show which were unknown in the first half of this century, when equable warmth was the desideratum, and the sensations of the patient the guide.

That marine climates (sea, sea-coast, and inland at moderate distances only) either have none of the three requirements or, in southern latitudes, only the one of equability of temperature. Against the favorable statistics of dry and elevated climates I challenge any one to *produce any recorded results achieved at the sea-coast of any latitude whatsoever* where local conformation (elevation) did not cause partial dryness.

That Newport possesses not only not one of the three constituents, but not even in a moderate degree, for the truth of which please see the tables as published in my first letter.

That the assumed law, "a local climate where consumption is confessedly rare is presumably a good one for consumptives to go to," is one of the old traditions, the killing of which is one of the chief aims of my life.

That the assumption, "such a climate becomes provedly such (good) where consumptives, introduced, are found to mend," is a fallacy overshadowed only by the previous one. Drs. C. T. Williams, Geo. Walshe, Loomis, and others have shown that the mending, such as takes place in climates like our sea-coast, is temporary; has reference only to gain in weight, and *bears no relation whatever to the process going on in the lung.*

That "permitting a comparative out-of-door life" in winter is the twin brother of the other two traditions, the faith in which has cost many thousands their lives by wasting time, the off-hand testimony of unrecorded cases to the contrary notwithstanding.

I reaffirm that equability can only be found in company with *relative* (very moderate) dryness, a fact which requires no proof.

That neither Dr. Denison nor myself ever denied that equability of temperature is a desirable factor for a minimum of cases, the so-called "irritable." That elevation is to be modified in accordance with the circulation (not the nervous system) is a dictum which Dr. Storer will find in my article on New Mexico and several others.

But Newport has no equability of temperature, no elevation, no dryness.

As regards Dr. Bowditch's article on the Isle of Shoals, referred to by Dr. Storer, and which Dr. Bowditch did *not* recommend as a resort for consumptives, but gave only meteorological facts. What Dr. Bowditch did write to me, and which will shortly appear in a lengthy article, is as follows: "I have no doubt that the sea-coast of New England, and possibly of the Atlantic further south, *is always injurious to the consumptive at any period of the disease.*" [1]

Let us have done with such designations of climate as "fair winter climate," "balmy," "invigorating," "life-giving," "inspiring," "soothing," "charming," and the like. These are so many appeals to our imagination and varying individual effects upon sensations. The only rules by which a climate is to be judged is by the rule of three, dryness, elevation, and equability, with medium temperatures (warm and cool) as against the extremes, hot and cold.

I own up as to a mistake in reference to pneumonia, counting 230 deaths from that disease in Newport County as against 171 in Bristol County, and forgot that this was not a computation per hundred, but a proportionately greater number of deaths in a greater number of people. This is allowed and more. The inhabitants of Newport may be, by absence of subsoil moisture, somewhat ahead in statistics of generating consumption. But I ask in all candor, What does this prove, when no investigator of the present will ac-

[1] The italics are by Dr. Bowditch.

knowledge local immunity as indicative of a favorable climate for consumptives so long as this immunity is not *absolute*?

What figures will do. Behold the following, compiled last year from letters received from State Boards of Health, in reference to deaths from consumption: Rhode Island, 1 in 391 persons; New Jersey, 1 in 389 persons; New York, 1 in 473 persons; Connecticut, 1 in 444 persons. All of which is respectfully submitted by yours truly, J. Hilgard Tyndale.

New York, *March* 29, 1883.

Miscellany.

THE DEATH OF PROFESSOR VAN BUREN.

In the death of Dr. William H. Van Buren New York loses one of its most cultivated and accomplished gentlemen, as well as one of the foremost of its surgeons and most successful of its medical teachers. For a considerable time past his health has not been good, and in May last he suffered a slight apoplectic attack, which had a very depressing effect upon him. Dr. Van Buren was a native of the city of New York, and was born April 5, 1819. He came of a family of physicians, and his grandfather, Abraham Van Buren, was a son of Dr. John Van Buren, a pupil of Boerhaave and a graduate of the University of Leyden, who emigrated to New York in the year 1700 from a place named Buren, near Amsterdam, Holland. Soon after his arrival there he was appointed physician to the almshouse, a position in which his son, Beekman Van Buren, who died in 1812, succeeded him. Dr. Van Buren was graduated from the Academic Department of Yale in 1838, and the Medical Department of the University of Pennsylvania in 1840. In 1842 he married a daughter of the late Dr. Valentine Mott, and went to Paris, where he devoted himself to the study of surgery in the hospitals for some time, and subsequently entered the French army. In 1845 he resigned his commission and returned to New York, where, on the organization of the Bellevue Hospital, he was appointed attending surgeon to that institution. In 1852 he succeeded Prof. Granville Sharpe Pattison in the chair of anatomy in the University of the City of New York, and the same year was appointed surgeon to the New York Hospital. It was under the inspiring influence of his illustrious father-in-law, Dr. Mott, who was about this time attracting universal attention in the medical world by the boldness and originality of his operations, and of whom he was an enthusiastic follower, that he acquired the deserved eminence as a surgeon, which he has ever since maintained. Later he was appointed, first, attending and then consulting surgeon to St. Vincent's Hospital and to Charity Hospital, Blackwell's Island, in the latter of which he conducted for many years the most popular venereal clinics ever held in New York, and also accepted the position of professor of the principles and practice of surgery in Bellevue Hospital Medical College, which he filled with distinguished ability up to the time of his last illness. In 1859 he was elected vice-president of the New York Academy of Medicine, and since then has been president of the Pathological Society, and occupied many other positions of trust and honor in the profession. At the outbreak of the late war he took an active part in the formation of the Sanitary Commission, and remained one of its executive committee until the close of hostilities. The position of Surgeon-General of the United States was offered to Dr. Van Buren at the instance of Secretary Stanton, and it is said to have been through his influence that Dr. Hammond received his appointment to that position.

Although so busily occupied with the arduous duties of active practice and professional teaching, throughout his career he devoted much time to writing, and his contributions to medical literature have added no little to his substantial fame. Among his principal works are the English version of Morel's Histology, which he translated and edited in 1854, his translation of Bernard and Hueter's Operative Surgery, which was furnished by the government to the army surgeons during the war, and his Contributions to Practical Surgery, published in 1865. The most enduring monument of his ripe skill and learning, however, is the well-known and classic work on genito-urinary diseases, which he wrote in connection with Dr. Keyes, and which embodied the results of his special experience and researches in a field in which for many years he stood *facile princeps*. The well-earned title of LL. D. was conferred upon him by his *alma mater* a few years ago in acknowledgment of the eminent distinction which he had won for himself as a teacher and writer.

The estimation in which Professor Van Buren was held in the community is shown by the fact that his funeral, which was held on the 28th of March at the new cathedral on Fifth Avenue, was probably the largest of any medical man ever known in New York. As many persons may, perhaps, have desired to attend that of the late Dr. James R. Wood, but the capacity of the church in which the services were conducted necessarily limited the number present. On the occasion of Dr. Van Buren's obsequies the whole of the vast cathedral, by far the largest church edifice in the city, was filled by his friends and mourners, and among them were many of the most distinguished men in every department of life. A solemn pontifical requiem or mass was sung, and the beautiful music of the service, which was made up of the requiems of Mozart and Cherubini, was rendered by the full cathedral choir. Archbishop Corrigan, coadjutor of the cardinal, celebrated the mass, and among the other church dignitaries present in the chancel were Vicar-General Quinn and Monseignor Doane, of New Jersey. The pall-bearers included Messrs. Cyrus W. Field, Royal Phelps, August Belmont, H. M. Alexander, S. L. M. Barlow, and W. H. Appleton, and Drs. C. R. Agnew, Abram Du Bois, R. F. Weir, George A. Peters, and Thomas Addis Emmet, and the Faculty of Bellevue Hospital Medical College, and the Fellows of the New York Academy of Medicine attended in a body.

A funeral discourse was preached by Father Hewitt, of St. Paul's, in which, after alluding to the exalted position of the true physician as "the minister of God's mercy," he paid an eloquent tribute to Dr. Van Buren's distinguished professional attainments, and to the integrity and worth of his character as a man. In speaking of his high regard for honor, and of the combination of dignity with courtesy in his distinguished appearance and graceful bearing, which always made him a personage of mark in whatever company he might be placed, he said that one had only to look at him and hear him talk to have one's conception of a

true man and perfect gentleman instantly raised. "Indeed," he went on to say, "he completely fulfilled the ideal of the good and great physician, worthy to be honored of God and man." After the ceremonies the remains were interred in the family vault of the late Dr. Valentine Mott, in Greenwood Cemetery.

MEDICAL CARE AS PRACTICED BY ANIMALS ON THEMSELVES.

WE find in *Lyon Médical*, February 4th, an interesting extract from the *Tribune Médicale* on the instinct in animals which leads them to take care of themselves when sick. The obvious "moral" of the article is that in certain points their treatment, being prompted by nature, is a guide for human therapeutics. The writer speaks first of the hygiene of animals with reference to diet and their treatment of excreta, saying on the latter point that no animal ever inhales the effluvia of his evacuations, while man frequently does so, with great peril of epidemics, from the habit of keeping the dejecta for months in closed vaults. In relation to the function of reproduction, all the mammals suckle and care for their young, keep them clean, wean them, and attend to their physical education. These different maternal instincts are little developed in the woman of civilized countries.

In the matter of therapeutics, animals having fever, diet themselves, keep at rest, seek darkness and cool places, drink water, and even go to bathe.

When a dog has lost his appetite he eats "dog-tooth," which acts as an emetic and purge. Constipated dogs eat with avidity fatty substances, as oil and butter, until they are purged. It is the same with horses.

From the surgical point of view, ants have an ambulance system; they dress the wounds of their wounded, covering them with a transparent liquid obtained from their mouths. The wounded chimpanzee stanches the blood by applying the hand over the wound or dressing his wound with leaves or turf. M. Frédet has noticed that a dog stung in the muzzle by a viper plunged his head in running water incessantly during several days. This dog got well. A hunting dog having been crushed by a wagon ran into a brook, and stayed there three weeks in winter. His food was carried to him there; he recovered. A terrier, whose owner lives in Paris, having a lesion of the right eye lay down under a counter, avoiding light and heat (he had always been in the habit of lying close by the stove). He treated himself by diet and rest. As local treatment during two days and two nights in succession he licked his right paw and applied it to the wound, renewing the process as often as it became dry. Wounded cats treat themselves by constant irrigation. M. Delaunay cites the case of a cat which remained lying for some time on a river bank, and of a three-months' kitten which stayed for forty-eight hours under a jet of cold water.

A MALPRACTICE SUIT AGAINST AN ESTATE.

IN New Hampshire, not long since, a suit was brought by a patient against the administrators of a deceased surgeon for injuries alleged to have been inflicted by the unskillful treatment of the surgeon. The suit was dismissed for technical reasons, which will be of interest, as similar cases may often arise. The court held that, as the action was for personal injuries, it could not be maintained after the death of the surgeon. It is the theory of the law that an action for injury done to property is not affected by the death of the alleged wrong-doer, but can be brought against his legal representatives; but that an injury to the person, as in the case above cited, is of an entirely different character, and does not survive the death of the surgeon who is charged with inflicting the injury. This may seem rather a narrow rule, and it may not be followed in all the States, but it has in it the basis of justice, as there would seem to be little chance of defending such a suit when the most important witness as to the alleged malpractice — the surgeon himself — is dead and gone. The condition of the patient might be the result of other causes besides the unskillful treatment of the surgeon, but it would be difficult to show such facts after the death of the only person fully conversant with the case. — *New York Medical Journal.*

POISONING BY APOMORPHIA.

THAT this drug is not, as has been claimed for it, an absolutely safe emetic, seems to be shown by some cases quoted in the *Edinburgh Medical Journal* for February. The first is by Dr. Pécholier, professor in the Faculty of Medicine of Montpellier, who gives an account of his own poisoning with this substance. Overworked and enfeebled physically by the milk diet which he had adopted for the preceding three months, Dr. Pécholier began to suffer from a very painful attack of rheumatic sore throat. During seven days he treated himself successively by salicylate of soda in doses somewhat larger than usual (six grammes at first, and four grammes at each of two other doses), by injections of morphia, and by the application of leeches to the neck. Not finding relief, he had recourse to an injection of about thirteen milligrammes (one fifth of a grain) of apomorphia. At the end of two minutes he was seized with very severe nausea without vomiting; respiration ceased completely, but returned in an irregular fashion, and left a state of inexpressible anguish. The colleagues of the patient, who were brought in great haste, gave a second dose of apomorphia, which caused vomiting, followed by fresh collapse, lasting from thirty to thirty-five minutes, during which time the respiration remained infrequent and stertorous, the pulse feeble and irregular, and the face livid. The application of sinapisms and a subcutaneous injection of sulphuric ether brought the patient out of this condition. In the evening there remained merely traces of the effect, and at the end of four days the angina itself had almost entirely disappeared. As to the cause of this unexpectedly energetic effect of the apomorphia, Dr. Pécholier thinks that the existing anæmia and the other circumstances mentioned above are more to blame than the morphia or the salicylate of soda, although the latter was taken too freely. In his remarks he calls attention to the close connection between the centres for vomiting and respiration in the medulla as explaining very satisfactorily the action of apomorphia on the respiration. In conclusion he recommends caution in the use of the drug and in the employment of the hypodermic method. Two other cases are also referred to in the same journal where sudden failure of the heart's action and

death occurred in boys aged eight and six years after the hypodermic injection of one thirtieth to one forty-fifth of a grain of apomorphia. In both cases the emetic action had been absent.

SUSTAINED MUSCULAR EFFORT.

The *Medical Press and Circular* notes an extraordinary instance of sustained muscular effort which was afforded during the flooding of the Australian mine at Sydney in December last. The drift from one shaft having unexpectedly broken into another, a rapid inundation took place, so that in a few minutes the lower levels were flooded, and the water stood thirty feet in the shaft. Twenty-seven men in one part of the workings were unable to ascend the shaft, being caught in a drift where the water soon rose so high that only by clinging to the timbers could they keep their chins above it. One by one during the terrible sixty hours that elapsed before help came did the men drop off exhausted, but five of them succeeded in holding on with their bodies immersed in water during the whole of that time and were brought out alive. The bodies of the other twenty-two were found scattered about on the floor of the drift.

RUPTURE OF THE BLADDER FROM ABORTION.

A writer in the *British Medical Journal* (January 6, 1883,) describes a case of rupture of the bladder, due to labor pains in a woman of intemperate habits, who was also subject to attacks of retention of urine. The woman when seen had been vomiting freely, and was in a state of collapse. No evidence of recent delivery was obtained, and death was speedy. Subsequent investigation brought to light the fact that the woman had complained of pain in her belly for two or three days previous to death. She had, however, been up and down-stairs until one P. M. of the day preceding her death, but when her husband came home at six P. M. he found her in great pain, and was told by his wife that she had been losing blood. A good many clots were in the chamber vessel, and these he threw away into the ash-pit. She kept getting up to pass water, but could not do it. The pain getting no better, and finding that his wife was altering for the worse, he had gone for a medical man.

The autopsy showed recent peritonitis, with effusion, consisting in part of urine and in part of serum. On the posterior wall of the bladder was a rent large enough to admit four fingers. The uterus showed signs of recent delivery, which were confirmed by the discovery of a three-inch fœtus among the "clots" in the ash-pit. The writer believes that "the pains in the belly," of which the woman complained for two or three days before death, were the commencement of the abortion; that when true expulsive efforts on the part of the uterus began, these efforts were aided by the action of the abdominal muscles, and that the bladder being at that time distended to its fullest capacity, the pressure of the abdominal muscles was the "last straw" necessary to produce the fatal lesion. He is therefore inclined to think that the rupture took place in the afternoon previous to her death. It is likely that the alcoholic condition of the patient would rob her of her sense of attending to the calls of nature, and that if she had only been seen earlier a simple catheterism might have saved her.

POST-MORTEM SPASM.

A remarkable instance of cadaveric spasm is reported in the *Edinburgh Medical Journal* for March, as follows: On the afternoon of the 30th of January a man was seen to issue from a privy situated in a stable yard in Aberdeen, and to commence the ascent of a ladder which gave admittance to a hay-loft. He had only ascended two or three of the steps of the ladder when a hostler who was standing near observed that he stopped, and heard him moaning. The hostler spoke, and asked him what was the matter, but receiving no reply, went up and laid his hand on him. He now perceived that something was wrong, and went and brought two others to his aid. They found that he was dead. The hostler described the occurrence in these words: "He had his feet on the rungs of the ladder, and was *holding on*, with both hands rather above his head. He made no sound after I took hold of him. I had to unclose his hands to get him off the ladder, and I think he was dead, as he gave no sign of life. His hands fell down, and he was limp when I unloosed his hold of the ladder." This account is also confirmed by the two other men who assisted to remove his body from the ladder. Unfortunately, no post-mortem examination was allowed, and the cause of this very sudden death is unknown. The man was known to be a dissipated character, about forty-two years of age, with no fixed residence and no particular means of livelihood, living about the stable yard, and trusting to the chance of earning a meal by doing any work which might turn up. He was consequently ill nourished and poorly clad.

The writer, who says that such cases are not very rare, remarks that in them there is generally found on post-mortem examination pneumonia or pulmonary apoplexy, — an exaggerated first stage of that disease, causing an engorgement of the heart, leading to sudden death, and probably this case may be explained in this way.

A CENTENARIAN.

Mrs. Margaret B. Loomis died in New Hartford, Conn., the 2d of August, 1882, aged one hundred and one years, one month, and twenty-four days. For the last twenty years she lived on farinaceous diet with oysters and clams. She drank in this time three gallons of cider brandy yearly, by medical advice, with evident advantage, saying she could not get up in the morning without a drink. But what was remarkable, when she was up she did not lie down till night, fearing, as she said, she should get into the habit of it. She knit thirty pairs of stockings in her one hundredth year, with other light housework. Her greatest feat was in taking her meals in a room two feet below her sitting and sleeping room, with only a single stair, thus stepping down and up a foot at a time and only the support of the jambs of the door to keep from falling. This she has done for seventy-three years, till the last few weeks.

John Yale.

Ware, Mass.

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 24, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	734	245	19.45	23.83	4.95	3.26	.14
Philadelphia	846,984	420	136	19.52	11.42	6.43	2.38	1.19
Brooklyn	566,689	286	—	10.94	25.06	3.88	2.18	—
Chicago	503,304	231	116	15.12	16.42	6.05	2.59	—
Boston	362,535	179	55	15.26	19.21	6.78	.56	—
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	190	74	23.72	12.10	8.94	5.79	6.84
Cincinnati	255,708	124	52	24.18	28.31	4.84	5.64	—
New Orleans	216,140	179	43	45.20	6.64	1.13	.57	36.78
District of Columbia	177,638	127	45	9.44	17.31	1.57	3.94	—
Pittsburg	175,000 (1883)	79	—	17.72	11.39	1.26	1.26	2.53
Buffalo	155,137	121	46	16.52	10.74	2.48	4.96	—
Milwaukee	115,578	43	22	23.25	20.92	9.30	2.33	—
Providence	116,755 (1883)	—	—	—	—	—	—	—
New Haven	73,000 (1883)	20	7	10.00	15.00	—	—	—
Charleston	49,999	29	5	—	10.35	—	—	—
Nashville	43,461	21	5	14.28	19.04	—	—	9.52
Lowell	59,485	26	5	7.89	15.78	3.85	—	—
Worcester	58,295	29	14	19.04	38.08	4.76	4.76	—
Cambridge	52,740	11	2	—	18.18	—	—	—
Fall River	49,006	32	15	15.64	15.64	9.37	—	—
Lawrence	39,178	16	9	6.25	18.75	—	—	—
Lynn	38,284	19	6	15.78	21.04	10.52	5.26	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	12	3	16.66	8.33	—	—	—
New Bedford	26,875	11	4	18.18	27.27	9.09	—	—
Somerville	24,985	10	1	10.00	—	10.00	—	—
Holyoke	21,851	12	5	49.99	16.66	25.00	—	—
Chelsea	21,785	9	2	11.11	53.33	—	—	—
Taunton	21,213	5	0	—	—	—	—	—
Gloucester	19,329	8	5	—	25.00	—	—	—
Haverhill	18,475	7	1	—	42.84	—	—	—
Newton	16,995	2	1	50.00	50.00	—	—	—
Brockton	13,608	3	2	—	—	—	—	—
Newburyport	13,537	7	3	28.56	14.28	—	14 28	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	10	5	10.00	10.00	10.00	—	—
Twenty-six Massachusetts towns	—	66	12	13.64	25.25	3.03	3.03	—

Deaths reported 3078 (no reports from St. Louis and Providence): under five years of age 1143: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 574, lung diseases 562, consumption 470, diphtheria and croup 150, small-pox 88, scarlet fever 87, diarrhœal diseases 52, typhoid fever 41, malarial fever 39, measles 35, erysipelas 22, puerperal fever 22, whooping-cough 20, cerebro-spinal meningitis 17, typhus fever one. From *diarrhœal diseases*, New York 17, Philadelphia 13, Chicago five, New Orleans and Buffalo three each, Brooklyn, Boston, and Cincinnati two each, District of Columbia, Pittsburg, Milwaukee, Worcester, and Fall River one each. From *typhoid fever*, Philadelphia 18, Pittsburg six, New York four, Chicago and Boston three each. Brooklyn two, Baltimore, Cincinnati, District of Columbia, New Bedford, and Newburyport one each. From *malarial fevers*, New York 19, New Orleans eight, Brooklyn four, Chicago and Cincinnati two each, Philadelphia, Baltimore, Fall River, and Salem one each. From *measles*, New York 21, Boston four, Cincinnati two, Baltimore, District of Columbia, Pittsburg, New Haven, Salem, Chelsea, Quincy, and Peabody one each. From *erysipelas*, New York eight, Philadelphia four, Cincinnati three, Boston and District of Columbia two each, Brooklyn, Pittsburg, and Buffalo one each. From *puerperal fever*, Buffalo seven, Milwaukee four, Boston three, New York, Philadelphia, and Chicago two each, Cincinnati, and Nashville one each. From *whooping-cough*, New York and Cincinnati five each, Brooklyn and Chicago two each, Philadelphia, Baltimore, Pittsburg, New Haven, Worcester, and Holyoke one each. From *cerebro-spinal meningitis*, New York six, Holyoke two, Chicago, Cincinnati, New Orleans, Lowell, Lawrence, Newton, Northampton, Peabody, and Medford one each. From *typhus fever*, Philadelphia one.

Thirty-one cases of small-pox were reported in Baltimore, Pittsburg three, Buffalo three, Holyoke two; scarlet fever 22, diphtheria 17, typhoid fever six, in Boston; scarlet fever 23, and diphtheria eight in Milwaukee.

In 45 cities and towns of Massachusetts, with an estimated population of 1,205,645 (estimated population of the State 1,922,530), the total death-rate for the week was 20.44 against 19.14 and 19, for the previous two weeks.

For the week ending February 24th, in 170 German cities and towns, with an estimated population of 8,699,235, the death-rate was 26.4. Deaths reported 4417: under five years of age 1991; consumption 707, lung diseases 614, diphtheria and croup 202, diarrhœal diseases 140, whooping-cough 70, scarlet fever 68, typhoid fever 58, measles and rötheln 40, puerperal fever 25, small-pox (Heilbronn two, Posen one) three, typhus fever (Hanover, Braunschweig, and Altenburg one each) three. The death-rates ranged from 14.6 in Münster to 34.7 in Chemnitz; Königsberg 33.5; Breslau 34.2; Munich 32.7; Dresden 23.1; Berlin 25.7; Leipzig 23.4; Hamburg 27.7; Cologne 25 5; Frankfort 21.4; Strasburg 25.4.

In the 28 great towns of England and Wales, with an estimated population of 8,620,975, for the week ending March 10th, the death-rate was 23. Deaths reported 3801: acute diseases of the respiratory organs (London) 395, whooping-cough 110, scarlet fever 65, fever 54, measles 41, diarrhœa 27, diphtheria 25, small-pox (London two, Wolverhampton, Birmingham, and Cardiff one each) six. The death-rates ranged from 15.6 in Cardiff to 33.4 in Preston; Sheffield 20; Bristol 21.3; London 21.7; Birmingham 23.9; Leeds 25.5; Hull 26.9; Liverpool 28.4. In Edinburgh 52.9; Glasgow —; Dublin 56.3.

For the week ending March 10th, in the Swiss towns, population 494,390, there were 44 deaths from consumption, lung diseases 43, diarrhœal diseases 14, diphtheria and croup 13, typhoid fever four, whooping-cough two, erysipelas two, puerperal fever one. The death-rates were, at Geneva 16.4; Zurich 16; Basle 31; Berne 33.9.

The meteorological record for the week ending March 24th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
March, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 18	29.767	48	38	34	53	47	50	50	SW	S	S	12	18	14	F	C	C	—	—
Mon., 19	29.868	34	48	28	61	78	95	78	NW	NE	NE	12	20	14	F	O	G	—	—
Tues., 20	29.571	36	51	21	86	60	73	73	SW	NW	NW	15	19	16	R	O	O	—	—
Wed., 21	29.852	26	34	18	58	69	48	58	N	NW	NW	12	14	18	F	F	F	—	—
Thurs., 22	29.981	26	35	20	49	100	87	67	NW	W	W	16	13	3	C	C	C	—	—
Fri., 23	29.945	26	35	20	64	56	61	60	NW	E	N	6	13	10	C	C	C	—	—
Sat., 24	29.926	30	36	20	64	60	88	71	NW	NW	NW	18	20	9	C	C	C	—	—
Means, the week.																		.30	—[2]

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening. [2] Inappreciable.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 23, 1883, TO MARCH 30, 1883.

BARNETT, RICHARDS, captain and assistant surgeon. To proceed to Fort Adams, R. I., and report to the commanding officer for duty at that post. Paragraph 1, S. O. 51, Department of the East, March 28, 1883.

CRONKHITE, HENRY M., captain and assistant surgeon. Relieved from duty at Fort McKinney, Wyo. T., and assigned to duty as post surgeon at Fort Fred. Steele, Wyo. T. S. O. 31, Department of the Platte, March 22, 1883.

DELOFFRE, AUGUSTUS A., captain and assistant surgeon. Granted leave of absence for three months. Paragraph 3, S. O. 71, A. G. O., March 27, 1883.

LORING, L. Y., captain and assistant surgeon. To proceed without delay to Fort Schuyler, New York Harbor, and report to the commanding officer for duty as post surgeon. Paragraph 2, S. O. 51, Department of the East, March 28, 1883.

MOSELEY, EDWARD B., captain and assistant surgeon. To report in person to the president of the Army Medical Examining Board in New York City for examination for promotion, and upon completion to return to proper station. Paragraph 3, S. O. 70, A. G. O., March 26, 1883.

PAULDING, H. O., captain and assistant surgeon. Relieved from duty at Fort Laramie, Wyo. T., and assigned to duty at Fort Sidney, Neb. S. O. 31, Department of the Platte, March 22, 1883.

SKINNER, JOHN O., captain and assistant surgeon. To report in person to the president of the Army Medical Examining Board in New York City for examination for promotion, and upon completion to return to proper station. Paragraph 3, S. O. 70, A. G. O., March 26, 1883.

TAYLOR, MARCUS E., captain and assistant surgeon. To report in person to the president of the Army Medical Examining Board in New York City for examination for promotion, and upon completion to return to proper station. Paragraph 3, S. O. 70, A. G. O., March 26, 1883.

TURRILL, HENRY S., captain and assistant surgeon. Relieved from duty at Fort Fred. Steele, Wyo. T., and assigned to duty as post surgeon at Fort McKinney, Wyo. T. S. O. 31, Department of the Platte, March 22, 1883.

SUFFOLK DISTRICT MEDICAL SOCIETY. THE SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE will meet at 19 Boylston Place, on Wednesday April 11th, at 7.45 o'clock. Dr. E. H. Bradford will show a Specimen of the Femur, two Years after the Operation of Osteoclasis. Dr. E. G. Cutler will report A Case of Cardiac Disease with Pneumonia. Dr. George M. Garland will read a paper upon Anæmic Murmurs.

ALBERT N. BLODGETT, *Secretary.*

BOOKS AND PAMPHLETS RECEIVED. — The Medical and Surgical History of the War of the Rebellion. Part III. Volume II. Surgical History. Prepared under the direction of Joseph K. Barnes, Surgeon-General U. S. Army, by George A. Otis, Surgeon U. S. Army, and D. L. Huntington Surgeon U. S. Army. First Issue. Washington: Government Printing Office. 1883.

An Index of the Practice of Medicine. By Wesley M. Carpenter, M. D. New York; William Wood & Co. 1883.

Quain's Elements of Anatomy. Edited by Allen Thomson, M. D., D. C. L., LL. D., F. R. S., Edward Albert Schäfer, F. R. S., and George Dancer Thane. In two volumes. Vols. I. and II. Ninth Edition. New York: William Wood & Co. 1882.

Twenty-Ninth Annual Report of the Superintendent of Public Instruction of the State of New York. Transmitted to the Legislature January 10, 1883. Albany. 1883.

The Treatment of Acute Eczema. By George H. Rohé, M. D. Baltimore. 1883.

The Dispensatory of the United States of America. By Dr. George B. Wood and Dr. Franklin Bache. Fifteenth Edition. Rearranged, thoroughly revised, and largely rewritten. With Illustrations. By H. C. Wood, M. D., Joseph P. Remington, Ph. T., and Samuel P. Sadtler, Ph. D., F. C. S. Philadelphia: J. B. Lippincott & Co. 1883.

Thirtieth Annual Report of the Pennsylvania Training School for Feeble-Minded Children, Elwyn, Delaware County. 1882.

An Introduction to the Study of Organic Chemistry. By Adolph Pinner, Ph. D., Professor of Chemistry in the University of Berlin. Translated and Revised from the Fifth German Edition by Peter T. Austen, Ph. D., F. C. S., Professor of Analytical and Applied Chemistry in Rutgers College and the New Jersey State Scientific School. New York: John Wiley & Sons. 1883.

The Untoward Effects of Drugs, a Pharmacological and Clinical Manual. By Dr. L. Lewin, Docent of Materia Medica, Hygiene, and Public Health in the University of Berlin. Translated by J. J. Mulheron, M. D., Professor of Principles of Medicine, Materia Medica, and Therapeutics in the Michigan College of Medicine, Detroit, Michigan. Second Edition, Revised and Enlarged. George S. Davis, Medical Publisher, Detroit, Michigan.

Transactions of the Rhode Island Medical Society. Volume II. Part VI. 1882. Providence. 1882.

Vision. Its Optical Defects and the Adaptation of Spectacles. By C. S. Fenner, M. D. Second Edition. Philadelphia: P. Blakiston, Son & Co. 1883.

Diagnosis of Ovarian Cysts by Means of the Examination of their Contents. By Henry Jacques Garrigues, A. M., M. D., Obstetric Surgeon to the Maternity Hospital, etc. New York: William Wood & Co. 1882.

In a Nutshell. Suggestions to American College Students. By Dio Lewis, A. M., M. D. (Advance sheets.) New York: Clarke Bros. 1883.

Hypodermic Medication in Catarrh. By Thomas Amory De Blois, M. D., Boston. (Reprint.)

Fifth Annual Report of the Connecticut State Board of Health for the Fiscal Year ending November 30, 1882, with the Registration Report, 1881, relating to Births, Marriages, and Divorces. Printed by Order of the Legislature. Hartford, Conn. 1883.

Circulars of Information of the Bureau of Education. No. 5. 1882. Maternal Schools in France. Washington: Government Printing Office. 1882.

Lectures.

ON MEDICAL ELECTRICITY.[1]

BY PROFESSOR DUJARDIN BEAUMETZ, PARIS, FRANCE.

Gentlemen, — I shall devote this lecture to the study of electricity, considered as a therapeutic agent.

You are already aware of the use which is made of electricity in the treatment of nervous diseases, and I desire to acquaint you with the physiological facts which are the basis of the therapeutic employment of this remedy. But in order that you may the better understand so difficult a subject, I shall refresh your memories with certain details of elementary physics. It is not indeed necessary that the physician should be a profound *physicist* (despite the common derivation of the words); he ought nevertheless to know the general principles of physics if he would be successful as an electro-therapeutist.

HISTORY.

From the beginning of the seventeenth century, when Gilbert, physician to Queen Elizabeth, first applied the term *electrics* to substances such as amber and sealing-wax, which, when rubbed, attract light objects, this department of physics has undergone a progressive evolution. Gilbert's crude discovery was improved upon by succeeding physicists, but it was not till the middle of the eighteenth century that the first applications of electricity to therapeutics were made.

In 1743 Kruger, professor at Helmstaedt, utilized, for the first time, in the treatment of disease the curious experiment of Nollet, who suspended Du Fay by silk cords, put him in communication with a plate electric machine, and drew sparks from his body. The year following Kretzenstein, a physician of Halle, cured, by electricity, a woman paralyzed in her little finger. Jallabert, of Geneva, in 1748, obtained a much more signal success with a patient affected for fourteen years with paralysis of the right arm; the cure was accomplished in two months by electrical treatment. Some years later (in 1775) Antoine Van Haen, physician extraordinary to Maria Theresa, not only cured paralysis, but also treated chorea by electricity.

From this date works on medical electricity follow with rapidity, and multitudes of cases are reported where this agent was used therapeutically. Mandit, of Varennes, published in 1779 a report of twenty-four observations. Mazars, of Cazelles, relates the history of one hundred and nine patients treated by electricity, and among the names of physicians who gave attention to this subject at this time I mention one who obtained a great celebrity in our revolutionary records, namely, Marat. Thus far frictional electricity alone was employed, but toward the end of the eighteenth century Galvani, and especially Volta, made new discoveries in the laws, properties, and methods of employment of this agent.

It was the 20th of September, 1781, that Galvani made his curious experiment with the frog, an experiment with which you are all familiar; and then arose that discussion between him and Volta, which resulted in the discovery of the electric pile.

Galvani maintained that the frog was a veritable electrical apparatus, and that all that was necessary was a metallic arc to bring into play this electricity. Volta took another view, pretending that the electricity manifested was generated in the metallic arc, and the invention of the pile seemed to justify his view. At the same time Galvani, in support of his opinion, made some remarkable experiments, showing that the simple contact of the frog's muscle with the sciatic nerve, without the intermediation of a metallic arc, was sufficient to excite contractions. Modern experimental research has confirmed the doctrine of Galvani, while at the same time doing justice to Volta. The discoveries of these two celebrated physicists were soon utilized in medicine; frictional electricity was abandoned, and voltaic piles everywhere came into use. In 1832 Faraday, by the discovery of induction currents, modified yet even more the applications of medical electricity, and the voltaic gave place to the faradic battery.

Till quite recently specialists in electro-therapeutics have been known to devote themselves exclusively to some one form of electricity, ignoring all others. Thus Duchenne, of Boulogne, looked for remedial efficiency in all cases to the faradic current, while Remak, then Legros, and Onimus, recommended only the voltaic current. A few meanwhile went back to static electricity; thus Reynolds, in England, and more recently Arthuis, in France. Of late static electricity has been brought prominently into notice by Charcot, and his pupil Vigouroux.

At the present day, owing to a better acquaintance with the subject, we have abandoned this exclusiveness in methods, and employ, as it best suits our purpose, faradic electricity, voltaic electricity, or frictional electricity.

Moreover, it would be a strange mistake to suppose that these electricities, of different sources, have different properties, comparable, for example, to the properties of three different medicines.

Electricity, from whatever source we obtain it, is one and the same, and the differences which we observe in the product of the various apparatuses, voltaic, faradic, and frictional, are resolvable into a *plus* or *minus* of quantity and of tension.

NEW THEORY OF ELECTRICITY.

Whenever you modify the electrical equilibrium of a body, whether by mechanical or chemical action, electricity is set free. Electricity then is a part of the molecular state of bodies, and is a mode of motion. We have now completely abandoned the ancient hypothesis of the existence in all bodies of two electricities, called positive and negative electricity, which were regarded as fluids, capable of neutralizing each other, and which could be separated by chemical action or by friction. It has been experimentally rendered certain that electricity is one of the ever-varying modes of force, and the new theory of electricity, like that of light, is based on the existence of ether, an imponderable fluid, which surrounds and penetrates all bodies; an elastic medium, so to speak, in which the atoms are enswathed. By chemical or mechanical action we break the molecular equilibrium of a compound chemical substance; certain atoms are put in a condition in which there is more ether around them than surrounds other atoms [the conditions of equilibrium being effected by the ether]; those atoms which possess most ether are electrified positively, those which contain a minus quantity of ether are electrified negatively. The

[1] From advance sheets. Translated by E. P. Hurd, M. D., Newburyport, Mass.

new definition then reads: electricity is the difference which exists between the actual quantity of ether which impregnates the molecules of a body and the normal quantity which it should contain.

This electricity may be relatively in a state of repose, or in a state of activity; hence the division into static and dynamic. But whether static or dynamic, electricity has qualities of tension, and manifests resistances which you must learn.

INTENSITY OF THE CURRENT.

There is a well-known formula which enables us to determine the intensity of an electrical current. This formula is represented by the following equation: $I = \frac{E}{R}$. Here I represents the intensity of the current; E the electro-motive force, which, so to speak, separates the electricities, or drives them apart to recombine through the circuit; R the resistance which results from the length and narrowness of the conducting wire, etc.

For these algebraic signs the Electric Congress, held in 1881, substituted names which it behooves you to learn, for these names now form part of the nomenclature of medical electricity.

The name *Volt* is given to the unit of electro-motive force, represented in our formula by E. To the unit of *resistance* (R) the name *Ohm* is given. The name *ampère* is applied to the unit of intensity (I). A current of a *Volt* passing in an *Ohm* (that is, the unit of electro-motive force acting on the unit of resistance) gives a unit of intensity, that is, an *ampère*. If the *ampère* is produced in a unit of time (that is, a second), you have the unit of electrical quantity, that is, a *coulon*.

Practically, the *Volt* or unit of electro-motive force is represented approximately by a Daniell's constant cell. As for the unit of intensity, that is, the *ampère*, it is not employed in medicine, being too powerful; it has therefore been divided into thousandths, to which division the name *milliampère* has been applied. On this basis is effected the graduation of certain batteries, and in particular those of Gaiffe.

STATIC AND DYNAMIC ELECTRICAL APPARATUSES.

The difference which exists between static and dynamic apparatuses results from the tension and from the quantity of electricity which they produce. In the frictional apparatus you get but little electricity, but electricity of enormous tension; the dynamic machines, on the other hand, such as the electric piles, produce a great quantity of electricity, but of feeble tension; place these batteries, however, in special conditions, and you will obtain analogous effects. Observe this spark from an induction machine, compare it with that given by this static apparatus of Carré, and you will see that they are of equal intensity.

Tension plays the same part in reference to electric currents as pressure does in liquids. You will often see a river with a considerable mass of water which is incapable of turning the water-wheel of a mill, so feeble is the current, while, on the other hand, a mighty rushing brook from the mountains shall furnish water power for an entire factory; this illustrates what I have said about pressure in liquids. It is the same with electricity, and while static machines give us violent effects, but excessively short, the electric piles give us prolonged effects, but of very feeble intensity. The faradic batteries are intermediate between these two extremes, but before entering upon the therapeutic applications of these different currents I will glance at their action on the economy.

PHYSICAL PHENOMENA OF THE ELECTRIC CURRENT.

Electric currents produce first of all physical phenomena of heat and light, which are utilized in medicine. The heat action is especially employed in surgery (for example, the galvano-cautery, which enables us easily and safely to perform grave operations). As for the phenomena of light, we have various apparatuses which enable us to illuminate by electricity internal cavities of the body, and thus diagnosticate morbid conditions. The polyscope of Trouvé is an example.

CHEMICAL PHENOMENA OF THE ELECTRIC CURRENT.

Besides the light and heat, determined by the passage of the electric current, medicine has utilized the chemical phenomena which result. You know that when you pass a current into a saline solution a decomposition of this solution is effected, and while the acid seeks the positive pole the base seeks the negative pole; the first is called the *acid* pole, the second the *alkaline*. Analogous modifications take place in the living tissues, and on these is based the interesting phenomenon of electrolysis. Already in speaking of the treatment of aneurisms, I have alluded to the beneficial effects of electrolysis in these cases. I shall not revert to this subject now, and shall only refer you to the important observations of Professor Le Fort, which go to show how numerous and how remedial are the modifications determined in the tissues by continued currents.

PHYSIOLOGICAL ACTION OF ELECTRICITY.

I come now to the study of the physiological action of electric currents, as this plays the most important rôle in the treatment of diseases of the nervous system. We will examine successively the action of electricity on the muscular system, on the nervous system, on the circulation, and finally on nutrition.

ACTION ON THE MUSCULAR SYSTEM.

As far as the muscular system is concerned, we know since the experiments of Galvani, experiments reproduced by Matteuci, Marianini, and especially by Du Bois Reymond, that there exists a proper muscular current, not only in the muscles of the frog, but of the whole animal series. This current, which has been described under the name of *current proper of the frog*, has been explained in different ways. Some, as, for instance, Hermann, have invoked (to explain the phenomenon) the chemical actions which are all the time taking place in the muscles, and in particular those going on in a substance not yet isolated, which he has described under the name of *inogene;* others, on the contrary, like Du Bois Reymond, have supported the hypothesis of the electro-motive molecular state of the muscular substance, each molecule of the muscle representing an element of the electric pile acting upon the neighboring molecules.[1]

[1] The experiments of Du Bois Reymond and others have determined the existence of electric currents in the muscles of all animals, but this current (very marked in the frog) becomes more and more feeble as you ascend the animal scale. In the same individual the current is the more active the more the muscle is exercised.

According to Hermann, the current is the result of the decomposition of *inogene* (a hypothetical substance) into CO^2, and an albu-

ELECTRO-CAPILLARY PHENOMENA.

All these theories and all these hypotheses which have been in vogue the past fifteen years are to-day abandoned, for the question is much more complicated than was formerly supposed, and the discovery of electro-capillary phenomena and currents of polarization has shown us how difficult is the explanation of the muscular current. As for the electro-capillary phenomena, it was Becquerel who first demonstrated their reality, showing us that when two solutions of different nature are separated by an organic membrane or a capillary space electricity is evolved. Our organisms reproduce, in quantity innumerable, the conditions of these electro-capillary phenomena, and it is easy to understand the part they play in the living being. As for currents of polarization, it has of late been shown that when you pass for a certain length of time a current through a muscle, if you arrest the current you cause to be produced in the muscle a current passing in the opposite direction, and of greater intensity; this current has been called the current of polarization.

These are facts which show us how manifold are the sources of electricity in the human body. Moreover, it is a matter of common experience that when you electrically excite a muscle (and for this purpose the induced current is the best) you determine energetic contractions, and you utilize this action in the treatment of muscular paralyses.

ACTION ON THE NERVOUS SYSTEM.

The remarks which I have made *a propos* of the muscular system are applicable also to the nervous system. The nerves, as well as the muscles, possess a current of their own; the nerve fibrils as well as the muscular are the seat of electro-capillary currents; the nervous mass as well as the muscular undergoes polarizations. The nerve current has been compared to electricity; to-day this comparison is given up; there can be no identity between currents of which one (the nerve vibration or "current") is so slow (ten times slower than sound), while the other is so rapid. What we now know is that under the influence of certain currents, as the faradic, the properties of the sensory or motor nerve reappear, and give rise to contractions of the muscular groups to which the nerve is distributed. We also know that by the influence of the electric current we modify the electric state of the nerve, and thus cause to disappear certain neuralgias of the most obstinate kind.

ACTION ON THE CIRCULATION.

Electric currents have a marked action on the circulation. Sometimes the current acts directly on the blood-vessel, whose contraction it produces; sometimes it acts on the vaso-motor centres, directly or indirectly, and in this way static electricity may produce effects analogous to those of hydrotherapy. When we place the patient on the insulated stool, and after having put him in communication with the static machine, I draw sparks from certain parts of his body, we effect a revulsive action on the skin resembling that produced by cold; there is first of all vaso-constriction, succeeded by vaso-dilatation, and reddening of the tissues.

minoid body called myosine. Du Bois Reymond supposes that the electro-motive molecules of the muscle are little centres of chemical action, turning their homologous sides in the same direction, and acting electrically the one on the other.

ACTION ON NUTRITION.

There is a physiological effect of electricity still more pronounced than the other effects above mentioned. I refer to the effect of this agent on nutrition. Under the influence of continued currents nutrition is seen to improve, and the vitality of the tissues is restored with new energy. Although we have not any absolutely scientific explanation of this effect on nutrition, it results probably from a double action, — direct action on the trophic nerves, and on the tissue molecules of the organism, whose vital energy is raised.

Such are, in brief, the effects which are obtained from electricity, whether from a chemical, physical, or physiological stand-point, and to accomplish our end we make use of the different kinds of apparatus which I now place before you, static, voltaic, and faradic.

When we desire to modify the cutaneous sensibility and nutrition in general we make use of static electricity; when we wish to limit electricity to a group of muscles, or when we wish to restore contractility to certain muscles, we use the faradic machine; when, finally, we wish to modify the molecular state of certain nerves, or give a new activity to certain tissues, we employ the continued currents.

[The remainder of the lecture, which is an exposition of the "technics" of electric machines by Professor Bardet, is omitted because the details are principally of interest to French practitioners using instruments of Parisian manufacture. Among static machines the apparatus of Carré is highly recommended. The large induction machines of Gaiffe and Trouvé are vastly superior to any of the smaller more portable machines, and the magneto-electric batteries (in such common use) are of but little worth. Trouvé's constant battery is of uncommon excellence, and is recommended to physicians as being convenient and portable.

Professor Bardet does not speak very highly of the little pocket electro-magnetic batteries of Gaiffe, so largely employed in this country and elsewhere. The vibrator is too diminutive, and the interruptions are too rapid. In every induction machine properly constructed there should be some means for regulating the current so that the interruptions may be very slow or very rapid at will. When a revulsive effect is desired the interruptions ought to be very rapid. When you desire to faradize a muscle in order to exercise it there is an advantage in being able to moderate the number of interruptions; you can thus obtain a more intense current. — Trans.]

Original Articles.

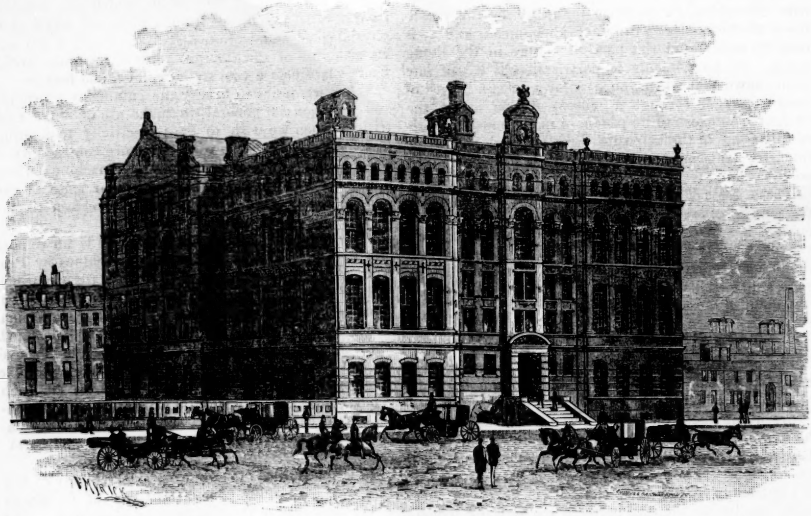
A DESCRIPTION OF THE NEW BUILDING ERECTED FOR THE MEDICAL SCHOOL OF HARVARD UNIVERSITY.

It has been thought that some account of the new building of the Harvard Medical School, which will be dedicated early in June next, and which is probably the most thoroughly built and best adapted to its purposes of any construction for like objects in this country, would be interesting to the readers of the Journal. With the aid of the cuts here given of the front of the building and of the plans of the different floors a very good idea may be obtained of the results

secured by a large sum of money directed and controlled by careful consultation between patient and skilled advisers, even by those who have been unable to visit the building itself. The result, it is believed, may be considered a striking success, as far as any such predication can be made of a thing not yet having stood the test of actual use.

The Harvard Medical School begins the second century of its existence with the occupation of this new building. This was rendered necessary by the growth of the school and the needs of the advanced system of education, which it has been so instrumental in promoting. The collection known as the Warren Museum of Anatomy had outgrown the space provided for it, and had become too valuable to be allowed to remain in a structure in which the risk from fire was so great as in the one now occupied. These facts were appreciated by the public, and the building has been erected and equipped solely by generous subscriptions, amounting in all to nearly three hundred thousand dollars.

In order to secure for each student that direct personal supervision and instruction forming such a marked feature of the courses offered, especially in the thorough laboratory training, which is so essential in securing a broad foundation for future clinical work, larger and better equipped rooms were required than could be obtained in the old school building. A comparison of the plans with their detailed description will give a clear appreciation of the facilities afforded to the departments of anatomy, physiology, and chemistry, and of the carefully arranged rooms for the lectures on therapeutics, materia medica, and those branches of medicine and surgery which can be taught away from the bedside of the patient.



HARVARD MEDICAL SCHOOL.

The building is situated in Boston, at the corner of Boylston and Exeter Streets, in that part of the city which is destined to be its educational centre. It is at nearly equal distances from the Massachusetts General Hospital, the City Hospital, the Boston Dispensary, and the Children and Women's Hospitals, with their rich stores of clinical material available for the purposes of teaching. The adjoining lot has been offered to the city by the State for the Public Library, while in close proximity are the Massachusetts Institute of Technology, the Museums of the Society of Natural History and of Fine Arts, the Medical Library Association, churches of all denominations, other public buildings and gymnasiums.

The corner position and the reservation of a large open area on the east will always insure good light and air to the building, which has a frontage of one hundred and twenty-two feet towards the north on Boylston Street, and of ninety feet towards the west on Exeter Street. It is handsomely built of brick trimmed with stone and terra cotta. Panels of the latter material inscribed with the names of men great in the annals of medicine are placed in the façade. In the interior the material used and the plan of construction are those which the experience of the present day has shown to be the best proof against fire.

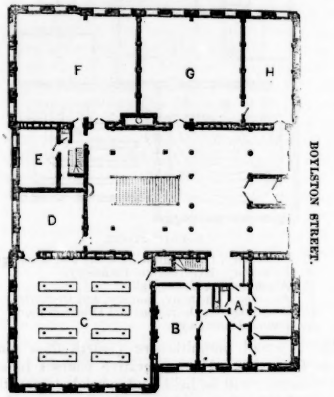
Heating and ventilation are accomplished by means of large stacks of steam radiators, which warm the fresh air as it passes over them to be distributed throughout the building. The air is removed by a series of flues connecting with a central shaft in which an upward current is maintained by means of heated coils of pipe. An additional amount of direct heat is furnished by small radiators placed in each room.

The plan, in general, is that of a large central hall, lighted from above, containing the main stairway, about which the different rooms are grouped. Adjoining this are two brick wells extending from the cellar to the roof. In one of them there is a stairway which gives access to the instructors' rooms, and which can be used as a fire escape if necessary. In the other

is the elevator for passengers and freight, with doorways opening at the several landings of the stairways, and others communicating with the various rooms connected with the laboratories and lecture rooms.

The main entrance to the building is into the central hall from Boylston Street. On the left or easterly side is an archway leading to a window opening into the janitor's apartments (first floor plan, A), where letters and packages for the students are received, and where bells and speaking tubes connecting all parts of the building unite.

From the southeast corner of the central hall opens the students' reading room (first floor plan, C), having an area of about sixteen hundred square feet, and amply provided with tables for reading and writing.

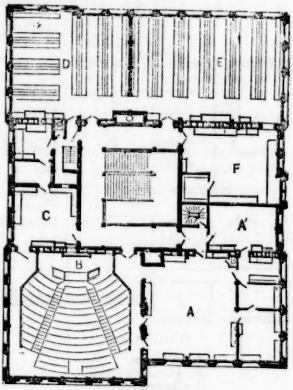


FIRST FLOOR.

A. Janitor's Apartments.
B. Coat Room.
C. Reading Room.
D. Smoking Room.
E. Anteroom.
F. Lecture Room.
G. Library.
H. Faculty Room.

Connected with this, as well as with the south side of the hall, is a smaller room (first floor plan, D), where conversation and smoking are allowed. Leading from the janitor's window to the reading room is a narrow corridor, from which the students' lavatories, etc., in the basement are reached, while the remainder of the latter is used for the heating apparatus and storage. The coat room (first floor plan, B) also opens from this entry. A large room, with adjoining anteroom (first floor plan, F and E), has not been especially assigned as yet, but will be used for lectures or recitations as occasion may require. Occupying the centre of the westerly side is the room for the general library (first floor plan, G) with ample space for its valuable medical classics, and the more recent books which are added from time to time. Next to this, on the north, is the room for the Faculty (first floor plan, H), where its meetings will be held and the school records preserved.

A broad flight of stairs leads to the second floor, which is entirely devoted to the departments of physiology and chemistry, with their laboratories and lecture room. The physiological laboratory (second floor plan, A) occupies a space of forty by thirty feet in the centre of the eastern side. It will be provided with the most approved apparatus for illustrating lectures and for students' use. Opening into the laboratory on the north are rooms for the professor and his assistants, as well as one especially fitted for chemical manipulation. Adjoining the laboratory on the west is a room for the mechanic, who takes care of the laboratory and makes needed repairs. Above is a room for a special library and study for the department. The laboratory is directly connected with the lecture room, beneath the seats of which are rooms for special and optical experiments. The chemical department occupies the entire western side of this floor. The large laboratory, having over two hundred desks, is divided to accommodate the classes in general and medical



SECOND FLOOR.

A. Laboratory, Physiology.
A'. Mechanic's Room.
B. Lecture Room.
C. Anteroom, Chemistry.
D. Laboratory, Medical Chemistry.
E. Laboratory, General Chemistry.
F. Laboratory, Special Chemical Analysis.

chemistry (second floor plan, D and E), and will be provided with spacious hoods, steam-baths, and all modern apparatus. Special analyses will be conducted in a small laboratory on the north side (second floor plan, F), and in rooms in a half story over this. The room for the professor is on the south, opening into the laboratory on one side and into a preparation room (second floor plan, C) adjoining the lecture room on the other.

The students' entrance to the lecture room (second floor plan, B) is from a landing half way between the second and third floors. This room, which will accommodate about two hundred persons, is furnished with raised seats, planned after a careful comparison of the most approved models. A large black-board and screen for diagrams are placed against the wall.

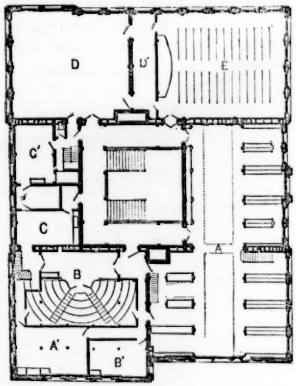
The third floor contains the amphitheatre for the lectures on anatomy and surgery, the Warren Anatomical Museum, and two large rooms for medical recitations.

The seats of the amphitheatre (third floor plan, B) are arranged in the manner implied by the name for the purpose of giving each student an unobstructed view of the demonstrations. The same general model of seat has been used here as in the room below, but so modified as to meet the special requirements of the

teaching. The room is thirty feet in height, and lighted from above as well as from the sides, and will accommodate about three hundred students.

On the south side are the rooms for the professor and demonstrator of anatomy (third floor plan, C and C′), while connecting with the floor of the amphitheatre by a short passage are the rooms for the surgical department and curator of the museum (third floor plan, A′). Direct access to the museum is also to be had.

The room intended for the Warren Anatomical Museum (third floor plan, A) extends eighty feet along



THIRD FLOOR.

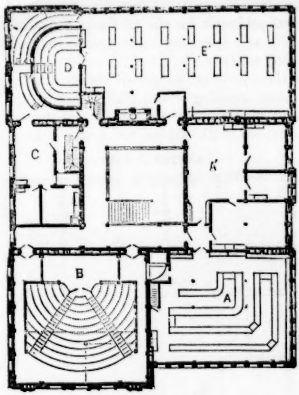
A. Museum.
A′. Curator's Room.
B. Amphitheatre.
B′. Anteroom.
C. Demonstrator's Room.
C′. Demonstrator's Room.
D. Lecture Room.
D′. Anteroom.
E. Lecture Room.

the north side of the building, is forty feet in width, and has a height of eighteen feet. The collection is placed in alcove and wall cases, divided into two tiers by a light gallery extending round the room. The cases themselves are handsomely made in the manner best adapted to prevent the entrance of dust and insects. Valuable illustrations are furnished for the systematic lectures on normal and pathological anatomy, surgery, and medicine by the specimens, which number over seven thousand. The museum is opened at stated times, and access for the purposes of study can always be had upon application.

The two lecture rooms (third floor plan, D) opening from the westerly side of this floor are especially intended for exercises which do not require extensive demonstration or experiment. The seats are placed on the floor level, while the lecturer occupies a raised platform, behind which are the screen and black-board. Separating these, but connecting with both, is an anteroom (D′) where diagrams and other illustrations can be kept.

In the southeast part of the fourth floor two large doorways give access to the upper part of the amphitheatre, and it is through these that the students enter. (Fourth floor plan, B.)

Occupying two thirds of the western side of this floor is the room for practical anatomy. (Fourth floor, plan E.) Large skylights give abundant direct light upon the tables for class work, while the windows lining the sides of the room serve the same purpose to benches for special students placed beneath them. Boxes for books, instruments, etc., with separate lock and key for the students' use, are placed against the



FOURTH FLOOR.

A. Laboratory, Pathological Anatomy and Histology.
A′. Laboratory, Experimental Pathology.
B. Amphitheatre, Upper Half.
C. Anterooms, Anatomy, Surgery, and Obstetrics.
D. Amphitheatre, Operations and Demonstrations.
E. Practical Anatomy.

wall. A small amphitheatre (fourth floor plan, D) opens from this. Here operative courses in surgery and obstetrics will be held, and special demonstrations given. In close proximity are the rooms for the demonstrator and his assistants (fourth floor plan, C), one of whom will always be at hand to aid the students.

The pathological laboratory is entered from the northeast corner of the building. (Fourth floor plan, A.) It has been arranged with special reference to the exhibition of recent morbid specimens, and for microscopical work. A private stairway leads to the museum, so that specimens for comparison or illustration can always be easily obtained. A series of continuous tables occupy the centre of the room, along which specimens can be passed for inspection after they have been demonstrated. The height of the tables has been regulated with special reference to the use of microscopes, as the classes in normal and pathological histology will also work here. Placed beneath the windows are tiers of boxes where the instruments are to be kept. Two large open sinks are provided for general use, and one smaller, and covered with a hood, for use in demonstrations.

Four smaller rooms (fourth floor plan, A′) connect with this laboratory, where advanced students or graduates desiring to make special investigations can do so under the direction of the professor of pathological anatomy.

From this brief description it will be seen that facilities are offered to the student for the thorough study of medicine in all its branches. The new laboratory arrangements are not excelled in this country, and the well-appointed lecture rooms afford every means for

the collection and display of illustrations. These greatly increased conveniences for laboratory and didactic instruction are supplemented by the numerous and varied opportunities for the observation and study of clinical cases, so amply provided at the different general and special hospitals and dispensaries.

DEEP ABSCESS OF THE THIGH.[1]

BY DAVID W. CHEEVER, M. D.,
Professor of Surgery, Harvard University.

DIFFUSE suppuration under the fascia lata is most common in children, if not peculiar to them. Its course is insidious, its cause various, its results fatal to limb or to life.

First correctly described by Chassaignac in 1857,[2] it has since been spoken of in surgical treatises as of varying importance, but has been most dwelt upon, among English writers, by Mr. Timothy Holmes, in his work on the Surgical Diseases of Children. Its obscurity, its fatality merit longer notice. Death of the thigh bone, spontaneous fracture of it, secondary hæmorrhage, amputation, and fatal septicæmia comprise its natural history if unrecognized and untreated. Pain, fever, swelling, disability mark its onset; œdema, delirium, typhoidal prostration, collapse characterize its continued progress and its close. Acute rheumatism of childhood or phlegmonous erysipelas are the diseases it simulates most closely. To mistake it for the first is hopeless disastrous, for the second involves less errors of treatment.

The long, bulky, flaccid, and thick adductor and femoral group of muscles render the thigh a peculiarly difficult region in which to detect fluctuation. The relaxed muscles bag, and sway, and vibrate between the fingers in a very deceptive manner. Much more does the great sac of the fascia lata mask the effusions which take place beneath it. This great expansion of fibrous membrane is continuous with the aponeurosis of the abdominal muscles, and extends from the pelvis to the knee and leg.[3] It is attached to the whole length of the thigh bone from the inter-trochanteric line to the widening of the linea aspera at the ham. It has its own muscle, which tightens the sheath of the thigh. It enfolds, embraces, and compresses the powerful muscles of this region, and forms part of the aponeurotic insertion of the vasti on either side. It has outlets for the passage of small vessels and nerves, at the saphenous opening, and in Hunter's canal for larger vessels. It is capable of holding an enormous effusion of blood or of pus. It yields to the spontaneous opening of an abscess reluctantly, and only under great hydraulic pressure. It guides the products of a diffused cellulitis directly down to the bone from its uniform and immensely strong attachment to the back of the femur. And if, on the other hand, the inflammatory effusion begins beneath the periosteum the pus, after stripping the bone, escapes only into the sac of the fascia lata to be held still in contact with its original starting-point, and to erode and necrose the shaft, and finally infiltrate the medullary canal: It follows the way of the least resistance, travels freely up and down the limb, fills, finally, one enormous, flattened, œdematous bag, extending over the whole thigh before it absorbs its covering, points, and bursts.

Such a condition of disease at the mobile period of childhood gives rise to intense constitutional disturbance. The child may perish before an opening, or it wastes with hectic after it. The thigh bone decays, absorbs, is snapped in two by the muscles; great vessels are punctured by the fractured shaft or, as we have seen occur, the fascia is cut through by absorption under the pressure of a riding fragment, and the spontaneous opening of the abscess is at once followed by protrusion of the end of the bone, a true compound fracture of suppuration.

The differential diagnosis of this disease is to be made from acute rheumatism, phlegmonous erysipelas, hip disease, psoas abscess, phlebitis, traumatic aneurism, sarcoma or cancer, bloody tumor of the thigh, typhoid fever. Of these affections acute rheumatism and hip disease are most frequently met with in childhood. Both affect the joints; deep abscess of the thigh does not. Mr. Holmes says the disease never extends to an epiphysis, yet I have seen it do so, secondarily, in one case. Acute rheumatism has early redness of the skin; diffuse suppuration has redness only at its close, if at all. Hip disease has muscular spasm of the joint, fixation, atrophy of the gluteus muscle, and a long previous history. Psoas abscess has early spasm of the psoas and iliacus muscles, swelling beginning at the groin; protrusion of a vertebra. Phlegmonous erysipelas has a more rapid course, is a disease of adults, yet it terminates in diffuse cellulitis. Phlebitis has the marbling of the superficial veins; a tender cord to be felt; induration at the saphenous opening; early œdema of the lower leg and foot. Traumatic aneurism is diffused under the fascia lata, has no pulsation, is of slow formation, and ends in suppuration. It has, however, a punctured wound in some part. Hæmatoma from ruptured veins has ecchymosis in the subcutaneous tissue, gravitating to the ham and calf. Sarcoma or cancer is usually more defined at first, yet it is often so soft a solid as to tremble under pressure, resembling fluctuation; it grows so rapidly in childhood that the diagnosis is difficult. Bloody tumor of the thigh is usually an inter-muscular nævus or angioma, semi-erectile and obscurely pulsating. Typhoid fever in childhood simulates the constitutional symptoms of deep abscess of the thigh, and the latter has been mistaken for it, as tubercular meningitis has often been. The depth and severity of the pain, and the rapid swelling of one thigh should distinguish the forming abscess.

Diffuse suppuration under the fascia lata may originate as a deep cellulitis in the connective tissue, or more frequently begins as a diffuse periostitis of the shaft of the femur, forms pus, and necroses the bone. Some authors think osteomyelitis is always present, Mr. Holmes thinks not. Undoubtedly the death of the bone may terminate in inflammation of the medullary membrane and suppuration in the cavity of the marrow. When spontaneous fracture occurs osteo-

[1] Read February 7th, before the Suffolk District Medical Society.
[2] Memoires de l'Academie de Chirurgie.
[3] The fascia lata is stronger on the outer than on the inner side of the thigh, having in the former the insertions of the gluteus maximus and tensor vaginæ femoris. Three of its expansions are firmer than the rest, and are named inter-muscular septa. Two, outer and inner, are fixed to the femur so as to limit on the sides the extensors of the knee, and a third intervenes between the adductors of the thigh and flexors of the knee. Above, the fascia is attached to the borders of the pelvis, the iliac crest, the pubes, and the pubic arch. Behind, to the lower end of the sacrum and coccyx, in the middle line. In front to Poupart's ligament. Behind the knee-joint it passes uninterruptedly to the leg; in front it blends with the vasti insertions, and is continued over the patella to the heads of the tibia and fibula. — *Ellis's Demonstrations of Anatomy.*

myelitis must be present. Cases which perish from septicæmia usually do so by absorption of septic elements passing up the open tissue of the marrow connective tissue. Acute periostitis in other parts of the body frequently leads to osteomyelitis.

I have seen and treated four cases of deep abscess of the thigh. All were in children between eight and fourteen years of age. Two were boys, and two were girls. Three arose in poor, destitute, and neglected children; one in a child in excellent circumstances and good country air. One was lost sight of, one was amputated and recovered, one was amputated and died, one died of exhaustion early in the disease. I have little doubt that the one which was lost sight of died. If so we have a mortality of three out of four.

CASE I. A little girl, admitted to the City Hospital. Great swelling and œdema of the thigh; exhaustion, pain; unknown history. Pus having been recognized, free openings were made, and a great suppuration found up and down the thigh. In the centre was the femur, absolutely denuded of all tissues, and crossing the cavity of the abscess, as bare as a broomstick, even at the linea aspera, for some eight or more inches. Amputation was advised, and refused. The mother took the child away. I never saw it again.

CASE II. A country lad of twelve years was seen at his home after he had been ill two months. At first thought to have slow fever, and then presenting the aspect of acute rheumatism, he had languished for weeks without a positive or a verified diagnosis. During the eighth week two attempts had been made to aspirate the thigh without result. When seen he was in a high fever, with hectic exacerbations. He was feeble, irritable, emaciated, and dependent on opiates. The whole thigh was largely swollen, œdematous, and very tender. No trouble below the knee. Deep fluctuation was detected, and a cautious opening made with the knife. The flow of pus was enormous. The finger was passed into an immense cavity. The thigh bone was found denuded, partially, on the inner and under surface, and towards the ham. A large opening and counter-opening were made, and good drainage secured. Under this treatment, with daily irrigation of the abscess, tonics, and the freedom from pain secured by the knife, he rapidly improved. The sac ceased to discharge largely, and he was got out-of-doors on a splint and with crutches. After some weeks the femur broke under an accidental, though slight, strain. His thigh was amputated by another surgeon, and he made a good recovery.

This case must have begun as a periostitis, soon becoming also an osteomyelitis.

CASE III. was a boy of nine years, an Italian, seen in consultation at the North End. He was intensely sick, delirious, typhoidal, very rapid pulse, and a petechial eruption. The thigh presented the same appearance as in the other cases. An opening was made through the fascia, a little above the knee, and at the edge of the vastus internus. Great flow of pus; large abscess sac; denuded femur. This child died on the third day, of exhaustion.

CASE IV. A feeble girl of fourteen years, of weak mind, and no history. The usual symptoms at their height when she was finally brought to the hospital. On opening found a large quantity of pus and a denuded and roughened femur. In spite of the best care in irrigation and drainage the child depreciated, and the pus burrowed into the ham. Next a septic abscess appeared over the ulna of the opposite arm; then the femur fractured spontaneously. Extension was put on, but not endured. The upper fragment then ulcerated through the fascia, rectus muscle, and skin, and the bone protruded; then severe secondary hæmorrhage came on. At this time, after the child had rallied, I insisted on immediate amputation. The parents refused, and took her away. After two weeks she was returned to the hospital, and amputated by my successor in service. She lingered a few weeks and died.

Here we had osteomyelitis secondarily, and purulent absorption through the medulla.

Treatment. The difficulties and the supreme importance of an early diagnosis are illustrated in these cases. To recognize the disease and to act gives a chance of saving the limb, provided the inflammation started in the connective tissue of the thigh. If it began beneath the periosteum a very early incision might abort suppuration, or render it tractable. It does so in suppurative periostitis of the tibia. It is, however, too much to expect that the surgeon can diagnosticate a diffused periostitis of a bone so deep in the tissues, and so small in shaft as the femur, and that he would care to risk a deep cut over the inner surface of the thigh bone through swollen tissues; yet early and free incisions give the only relief to the tense fascia lata and to the bone. As to the latter, a necrosed femur, from any cause, gives a bad prognosis for healing the limb and restoring the bone to health. The risks of an opening are increased by the fact that it is generally indicated by fluctuation on the *inner* surface of the thigh, because here the fascia is thinner than on the outer side. Pus, then, seeking the way of the least resistance, distends and points (finally) on the inner side.

Aspiration is useless for treatment; it may aid diagnosis, it may not. An exploratory incision should be made by Hilton's method, cutting cautiously down to the fascia, nicking it, and then boring the way into the pus cavity with a blunt instrument or the *finger*. Very free openings and counter-openings are required. Entire cleanliness, rest in bed, and abundant food are indicated. Where the shaft of the femur is *largely denuded* we should *amputate*. The prognosis is grave from the beginning. Mr. T. Holmes well says, "there are few cases where art can do so much, and nature so little."

WOUND OF PERINÆUM EXTENDING INTO VAGINA; COMPOUND SEPARATION OF SYMPHYSIS PUBIS, WITH PROTRUSION OF BLADDER.[1]

BY C. D. HOMANS, M. D.,
Surgeon Boston City Hospital.

JENNIE R., a negress, twenty-three years old, married, was brought into the City Hospital at about nine A. M. April 19th, with the following story: The night before, at about twelve M., she fell from the eaves of a house while trying to escape from the police. She fell about four stories, and struck upon the end of an empty wooden ash-barrel, with presumably her left leg inside. She was brought in in a state of shock and under the influence of opium. The pulse was weak and frequent, respiration shallow, pupils contracted to a pin-hole, skin cold and moist. There was history of

[1] Read before the Surgical Section of the Suffolk District Medical Society, February 7, 1883.

profuse hæmorrhage, but after she entered the bleeding was slight.

After a preliminary examination she was put to bed, and treated with stimulants, heaters to feet, etc., under the direction of Dr. Edward J. Cutter, house surgeon, who kept very accurate records of the case.

On my arrival she had reacted somewhat, and a thorough examination was made, which disclosed injuries as follows: —

There was a deep jagged wound starting at a point a little to the left of the coccyx and following the gluteo-femoral fold to the posterior portion of the left labium majus; a rent through the posterior wall of the vagina; separation of the soft parts from the arch of the pubes; a rough wound through the mons veneris, through which protruded the separated ends of the pubes, and behind them fell the bladder. This was the principal injury. There were some scratches on the right labium. The hand could be passed freely up beside the rectum and vagina and into the subperitoneal space above the bladder. There was no evidence of any wound into the rectum or peritoneal cavity. The separation of the symphysis was made out to be about 2.5 inches.

The urine was drawn with great difficulty, and examined with the following results: Color dark, reaction acid, specific gravity 1028, albumen heavy trace, sediment considerable, floculent, consisting of blood, pus, renal and bladder epithelium, hyaline, granular and epithelial casts.

A drainage tube was inserted, extending from above the symphysis, through the vagina and the wound, and emerging at the extreme posterior end of the latter. The bladder was replaced, the vagina tamponed, and the symphysis brought nearly together and confined by a canvas pelvic jacket.

A catheter was left in the bladder with tube attached, and oakum was packed about and between the thighs. She was put on a liquid diet — milk, beef tea, and egg-nog, with a liberal allowance of stimulants and opiates pro re natâ. The wound was thoroughly irrigated, and the bladder washed out every day with a one per cent. solution of carbolic acid.

During the first week her condition was very unpromising; the pulse varied between 120 and 130 per minute; the temperature had a mean daily variation of from 2° to 3°, averaging between 100° and 103° F.

She complained constantly of pain, though given quite as much opium as was thought safe. She was very restless, turning constantly in bed, which interfered sadly with the position of the pubes. The parts were very swollen, the wound sloughy, and the discharge excessive and offensive. The urine continued albuminous, with pus, blood, and casts as before in the sediment. There was, however, little vomiting. The bowels were open, and no œdema of face or limbs observed.

From April 24th to April 28th her condition was considered to be very critical, but after that time she began to improve. The catheter was removed, and after the 1st of May was only passed occasionally.

During the week following the wound cleared off rapidly, and the pain subsided so that opium was required at night only. During the second week in May patient developed a cystitis, the urine becoming ammoniacal. This was treated by washing out the bladder with a one per cent. solution of carbolic acid, to which a little nitric acid was added, with good result.

May 23d. Urine normal. Examination shows the symphysis separated about one inch, the wound anterior to the vulva healed, the wound in the perinæum is closing in.

June 1st. Marked febrile action, with pain and tenderness over abdomen, and tympanites. Ordered: Poultice to abdomen, pil. opii gr. i. every three hours, quinia gr. x. at night, milk diet.

This attack, characterized by the above symptoms, with evening temperatures of 103° to 104° F., with nearly complete remissions every morning, lasted about a week. There was but once anything approaching a rigor, and only during the first twenty-four hours was there vomiting.

June 11th. There has been a complete remission since yesterday morning; no pain; tongue clear and moist; evening temperature 99°, pulse 80.

June 13th. Examination by vagina and rectum shows the parts to be in nearly a normal condition. The separation of the symphysis is wedge-shaped, the bones being nearly in apposition below. The wound in the gluteo-femoral fold is open only enough to admit the point of the syringe; discharge scanty.

June 27th. Patient sits up in bed nearly all day.

She was at this time very much troubled with vesical tenesmus, but the urine was normal. There was also some slight discharge from the vagina, which was treated with hot and astringent douches. She complained of severe darting pains in her back and left leg at times, requiring opiates.

Her general condition continued to improve, with no marked relapses, and on July 24th she sat up.

July 28th. Patient walks round on crutches.

August 13th. Can walk a short distance without crutches.

August 20th. Discharged, nearly well.

Patient was seen in October, some weeks after the last date, quite well, save for some leucorrhœa. She could walk on a floor or level ground very easily, but could not go up-stairs without difficulty. At the present date she cannot be found.

REPORT ON PROGRESS IN MENTAL DISEASE.

BY WILLIAM B. GOLDSMITH, M. D.

Little that can fairly be called progress from a medical or scientific stand-point has attended the recent labors of alienist physicians; and the utterances of many competent and experienced observers are simply confessions of continued unsatisfactory result from various investigations and methods, which have been looked to very hopefully; but the benefit of these recognitions of failure is already evident in the tendency to a more catholic spirit now apparent in the study of mental disease, and in the relegation to their proper associated importance of certain departments of the work, like pathological anatomy and druggiag, which over-sanguine anticipation as to results had given too high a place. The older alienists of the present generation revolted vigorously against the theologico-metaphysical system of studying insanity, which had proved its uselessness with their predecessors, and it is not strange that they devoted themselves to the investigation of somatic conditions with undue confidence and exclusiveness.

THE RELIABILITY OF DISCERNIBLE CEREBRAL CHANGE AS EVIDENCE OF INSANITY.

The uncertainty of our present knowledge of the pathological anatomy of insanity is variously stated by the comparatively few observers who are at the same time competent clinical students of insanity, and thoroughly familiar with the post-mortem condition of the cerebro-spinal system in patients dying from all forms of disease. Dr. Tuke[1] represents Professor Westphal as saying that "he is unable to trace in the majority of the post mortems of the insane, who have not suffered from general paralysis, any morbid appearance of the brain or its membranes, either with the naked eye or the microscope. He maintains that it would be impossible to designate amongst a hundred miscellaneous brains those which had belonged to insane persons, if the cases of general paralysis had been eliminated." And "again, taking only cases of general paralysis, Professor Westphal holds that in by far the greater number of brains of insane persons dying in an advanced stage morbid appearances similar to those which he has described in Griesinger's *Archiv*, I., etc., can be traced. The morbid appearances of the cord occurring more frequently than those of the brain." In the same article it is said that Dr. Herbert Major "inclines to think that, even putting aside general paralytics, the sane may be generally distinguished from the insane brain. His experience at Wakefield (West Riding Asylum) shows that in only seventeen per cent. of the autopsies, excluding general paralysis, the brain showed no decided morbid change." But he explains that the morbid changes which make the condition of the brain quite different from that of a healthy and vigorous organ do not always differ in character, though he thinks they do in degree, from those found in the brains of some sane persons dying from exhaustive disease. Dr. Major finds appreciable morbid changes in the brains of all general paralytics, "although in five per cent. of the cases they were not typical of general paralysis."

Both Professor Westphal and Dr. Major agree that the connection of particular morbid symptoms, either motor or mental, with the changes found after death, "is exceedingly uncertain and doubtful." Dr. Mickle[2] has attempted, in an analysis of one hundred cases of general paralysis, to show some connection between lesions of certain areas of the cortex and hallucinations of the special senses, without success; and this would undoubtedly have been the case had he located the diseased areas more accurately than can be done by simply observing the adhesions of the pia mater. The sensory symptoms in general paralysis are so multiform and variable, and the morbid brain changes so generally distributed, that little can be hoped for from this line of investigation; and, as regards mental symptoms, in spite of the sanguine prediction of Professor Ferrier at the International Congress, that we are approaching the time when parts of the brain engaged in various kinds of psychical action can be definitely separated, there is yet a complete barrenness of proof that such separation of functional areas exists at all, as well as concerning the special seat of any given function.

Dr. E. Mendel, of Berlin, in his recent monograph upon mania, calls it a functional disease, and is unable to associate it with any morbid anatomy. Dr. Spitzka[3] discusses comprehensively the reliability and constancy of post-mortem evidences of insanity, and, after quoting Dagonet, Krafft, Ebing, and other European observers, in proof of their uncertainty, summarizes his own conclusions and those of other reliable observers, as follows: "That positive and indisputable evidence of insanity cannot be found in more than thirty per cent. of the insane; that in another thirty per cent. slight changes are found, not differing in character, though perhaps in extent, from what we observe in some sane subjects, while in the remainder there is no visible deviation from the normal standard of any kind. To be more specific in regard to the various forms of insanity, I may represent the likelihood of finding structural changes in the insane brain as follows: In mania . . . the likelihood is as 5:100. In acute melancholia (strictly limited) . . . it is almost zero. In epileptic insanity . . . it is as 20:100. In monomania . . . it is as 5:100. In the terminal states it is as 60:100. In imbecility and idiocy as 80:100. In progressive paresis of the insane it reaches the figure 99:100, and here alone and in insanity with organic diseases does the autopsy approximate the dignity from every point of view of a scientifically positive test."

The doctor is certainly none too skeptical in this analysis, as few observers would recognize anatomical proof of mental defect, teratological or other, in eighty per cent. of all cases of imbecility and idiocy, unless the observations were confined to cases showing the advanced grades of imbecility.

The conclusion to be drawn from a summary of all these opinions is about as follows: In one incurable form of insanity, progressive paresis, including probably about seven per cent. of the admissions to asylums in this country, and not more than that of the whole number of the insane, reliable evidence of the disease is shown on post-mortem examination in nearly all cases. In other forms of insanity no morbid brain changes are found with sufficient constancy to make it even probable that they are the essential lesions of the disease, until terminal dementia is reached, when changes are often found which constitute strong evidences of mental impairment, but in no way indicate the character of active mental disorder which has affected the patient.

PECULIAR CONFORMATION OF THE BRAINS OF CRIMINALS.

This subject, brought into prominence by Benedict,[4] has been much discussed of late. This observer shows an unscientific readiness to draw definite conclusions from a meagre basis of facts which had not been carefully analyzed and compared. He thinks that "the brains of criminals exhibit a deviation from the normal type, and criminals are to be viewed as an anthropological variety of their species, at least among the cultured races." The particular deviation which he finds most frequent is a "confluence" or connection of fissures having no connection in the brains which he chooses to regard as typical, and the existence of four instead of three horizontal frontal gyri, which he regards as a reversion of type because of its similarity

[1] Presidential Address, by Dr. D. Hack Tuke, Journal of Mental Science, New Series, No. 83.

[2] Hallucinations in General Paralysis of the Insane, Especially in Relation to the Localization of Cerebral Functions. Journal of Mental Science, New Series, Nos. 83, 84, and 85.

[3] The Grapotte Case, by Dr. E. C. Spitzka, American Journal of Neurology and Psychiatry, May, 1882

[4] On the Brains of Criminals, translated by Dr. Fowler. Wood & Co., New York. 1881.

to the four gyri of the carnivora; but, granting that forty-four brains are enough to generalize from if proved peculiar to the criminal class, he makes no sufficient comparison to show that these deviations are not common to others of the same nativity subjected to like conditions in life. Nor does he consider the history of the criminal life, and to accept his conclusions one must assume that a given criminal act is always the result of similar cerebral conditions, whereas the mental processes leading to the same act in different criminals may have no similarity, and their mental capacity may be of any grade.

Dr. Osler [1] gives a brief history of the two executed criminals whose brains he describes, and partially avoids this error, but the chief value of his paper consists in the fact that he examined sixty-four hemispheres from thirty-four patients who died in a general hospital, making no selection of cases, and concludes therefrom "that a considerable portion of the brains of hospital cases are of the confluent fissure type," and that this peculiarity cannot be assigned any special significance until much fuller information is gained about it.

Dr. Schwekendiek [2] reaches about the same conclusion from his study of ten brains of criminals and suicides. He considers them irregular in conformation, but thinks no specific irregularities are known to be characteristic of the brains of criminals, and that certainly neither confluent fissures nor four frontal gyri indicate a criminal type of brain. The records of his own cases are of little value except in disproving this belief, because the reader is unable to distinguish between the brains of criminals and suicides, much less to judge as to the degree of their criminality.

From the cases thus reported it seems true, as clinical study indicates, that most criminals are of poor cerebral organization, and that their brains show unusual irregularities of conformation, but there is no evidence to prove that these irregularities are confined to brains of criminals.

SEDATIVE DRUGS.

Though few medical men in asylums or in outside practice are prepared to emulate the example of Dr. Davies,[3] who points with evident satisfaction to the fact that he has used none for two years in an asylum containing twelve hundred patients, it is undoubtedly true that confidence in their value in the treatment of mental disease has been decreasing of late, the belief apparently gaining ground that their beneficial effect on morbid mental symptoms is transient and less marked than the inseparable evils attending their physiological action. Hyoscyamine, not long ago hailed as the physiological antagonist of maniacal excitement, has failed to hold the position it first assumed, and is less used, though eagerly taken up by the asylum officers, partly through hope of its extensive therapeutic value and partly because its paralyzing effect rendered it very convenient among difficult patients when mechanical restraint was not used.

How small a part sedative drugs now play in the treatment of insanity in asylums is approximately shown in an article by Dr. Wilbur,[4] where the records of fifteen prominent British asylums, containing on an average seven hundred patients each, show that practically no sedatives at all are given in eight of them, and that the average daily number of sedative doses given in each asylum is ten. In twenty-three American asylums, averaging over five hundred patients each, the average number of sedative doses given daily in each is twenty-seven, though about half of the asylums present an average nearly as low as that of the British. As about three fourths of these doses were chloral, the difference is undoubtedly due largely to the fact that it continues to be the habit in many hospitals in this country to give a large number of "sleeping draughts" nightly, though here, as well as elsewhere, strong endeavors are being made, under rather peculiar difficulties, to secure employment or exercise, and consequent physiological weariness, in the treatment of all patients whose restlessness is not accompanied by exhaustion.

(To be concluded.)

[1] On the Brains of Criminals, Dr. William Osler, Canada Medical and Surgical Journal, February, 1882.

[2] E. Schwekendiek, Untersuchungen an zehn Gehirnen von Verbrechern und Selbstmördern, mit zwei Autographischen, Tafeln. Wurtzburg. 1882.

[3] Report of the Kent County Asylum, England, 1882, Dr. Davies, Superintendent.

[4] Chemical Restraint in the Treatment of the Insane, Dr. H. B. Wilbur, Archives of Medicine, vol. vi., p. 271.

Reports of Societies.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SURGICAL SECTION.

H. C. HAVEN, M. D., SECRETARY.

FEBRUARY 7, 1883. DR. R. M. HODGES presiding. DR. C. D. HOMANS read a paper [5] entitled

WOUND OF PERINÆUM EXTENDING INTO VAGINA; COMPOUND SEPARATION OF SYMPHYSIS PUBIS WITH PROTRUSION OF BLADDER.

DR. GAY stated that he had had three patients with traumatic separation of the symphysis pubis. One was the case of a man who had fallen from a height, and received a fracture of the left femur and a distinct loosening of the symphysis pubis. He made a good recovery. An adult is in the hospital at the present time suffering from this injury caused by a fall. The third case was that of a large, heavy man, who was thrown from his horse, hitting the pommel of the saddle. Suppuration and a long and tedious convalescence ensued. Crutches were discarded at the end of a year, and the recovery bids fair to be permanent.

DR. HODGES said that it would be interesting to know the condition of Dr. Homans's patient some time after the accident, in view of the lameness resulting from the slight so-called separation after parturition, which is only a stretching of the ligaments and perhaps synovial effusion. It seems hardly possible that such a severe case can be recovered from without lameness. Another interesting point is that apparently the urethra did not suffer much, micturition not being interfered with in spite of the separation and laceration.

Dr. Hodges asked Dr. Gay if in his case he thought that the abscess resulted from extravasation.

DR. GAY had noticed carefully that no urine came from the wound, and that except a slight smarting and the passage of a few drops of pus there had been no disturbance of micturition.

DR. CHEEVER spoke of a case of extrophy of the bladder where there was separation of the symphysis.

[5] Vide page 344 of this number of the JOURNAL.

As is apt to be the case the girl walked in the peculiar straddling way, which has been described, due to the defect in the pelvis.

DR. HODGES instanced several cases where the walk was of this peculiar character. He had previously supposed it to be due partly at least to a desire on the part of the patient to facilitate the escape of the urine.

DR. D. W. CHEEVER read a paper entitled

DEEP ABSCESS OF THE THIGH.

In the discussion which followed DR. WEEKS reported a case in which the position of the limb and all the symptoms pointed to hip disease. He watched it carefully for a week before the correct diagnosis was made. An opening and counter-opening were made, and a large amount of pus evacuated. A complete recovery took place in five weeks. This probably did not start as a periostitis.

DR. MCDONNOUGH mentioned the case of a laborer who fell across a wheelbarrow. When seen some time after the accident a large abscess on the outside of the thigh was found, and opened, but no counter-opening was made. After consultation the opening was enlarged, and the femoral artery found lying across the cavity. Death resulted from hæmorrhage of a branch of the femoral.

DR. C. D. HOMANS had recently seen two cases, both children. The first was the child of parents in comfortable circumstances. The disease had only been going on two months. The abscess was opened, and a large amount of pus evacuated. The femur was extensively diseased. The thigh was amputated, and a complete recovery occurred in about a fortnight. The second case was that of a boy who had had the disease longer. The history was about the same except that his general condition was not as good. The thigh was amputated. Death resulted in ten days. They are very serious cases.

DR. GAY had seen several cases, none of which had recovered. In one the popliteal space was found to be full of pus. Amputation was advised, but refused. The patient left the hospital, and died some time later. They are very tedious and very severe.

DR. WEEKS thought that hospital practice would afford exceptional cases, that is, they would not come under observation until late in the course of the disease, and that therefore the results would be less favorable.

DR. R. M. HODGES thought that, as a rule, these cases occurred in poorly-nourished patients, and those whose hygienic surroundings were bad; therefore more cases are met with in hospital than in private practice. In all those reported the disease was in an advanced stage. If proper surgical skill had been employed in the first stages undoubtedly the mortality would have been much less. A part of its seriousness arises from the fact of its being located in the thigh. The same consequences occur in the leg and also in the fore-arm, though not as severe. In the thigh the bone is deep-seated; it is near the trunk and large vessels; the leverage of the muscles renders fracture more liable; all these render it more serious.

DR. HODGES asked if the epiphysis was affected.

DR. CHEEVER answered that in one of the cases it was involved secondarily, and the disease extended into the joint. There was, however, no true separation.

[1] See page 343 of this number of the JOURNAL.

DR. W. J. OTIS showed

A NEW INSTRUMENT FOR THE OPERATION OF TRACHEOTOMY,

the peculiar feature of which was the combination of a tenaculum and dilator.

In the discussion which followed DR. HOMANS said that it was true that the operation of tracheotomy was an unpleasant and annoying one; the more one did it the more one disliked to do it. He thought that the French instrument mentioned by Dr. Otis, would be, if perfected, of great use.

DR. J. C. WARREN said one important thing was the keeping open of the tracheal wound. The introduction of the tube was often difficult. He thought this instrument would be of service.

DR. WEEKS thought the instrument shown did the work of two instruments, and was therefore good. It would afford an opportunity for careful inspection, which is difficult in the ordinary performance of the operation. He did not see how the French instrument could be safely used in tracheotomy on account of the veins overlying the trachea. It might be of use in laryngotomy.

DR. LIEBMANN presented a communication entitled

A NEW TREATMENT OF VENEREAL WARTS.

"I wish to direct the attention of the gentlemen to what I think a new mode of treating venereal warts. I mean the local application of salicylic acid. The case was an intractable one and baffled all other remedies at my hands, as oxide of zinc, chromic acid, caustics, etc. There were five or six pretty large growths around the corona glandis, and the patient would not listen to the use of the knife. At that moment I remembered having read about the salicylic acid treatment in ordinary warts, and the histological composition of the two varieties of warts being about the same, the venereal wart being somewhat more vascular only, I resolved to give my patient the benefit of the experiment. I ordered the formula which our townsman, Dr. White, had recommended in the treatment of ordinary warts, and which is about as follows: Salicylic acid, thirty grains, extract of cannabis indica, ten grains, collodion, half an ounce. To be applied every other day.

"From the very start there was a great improvement, The superficial layers of the warts sticking in shreds to the membrane formed by the solution and coming off with the latter. But after the continuation of the treatment for three weeks there came a stand-still. Then I ordered the application to be made daily and liberally. Now things progressed favorably, layer after layer came off; there was but slight pain, and no suppuration. After two months a perfect cure was established. The only disagreeable feature about the treatment was the slow progress and the green color of the solution. This can be obviated by leaving out the cannabis indica, which, in my opinion, is of no consequence, and in future I shall prescribe the acid and collodion alone."

DR. J. C. WARREN said that he had tried this remedy in ordinary warts with fair success, but in rapidly growing warts the results were not as good, he thought, as a strong solution of salicylic acid. He had tried it on superficial forms of epithelial growths, with as yet negative results.

DR. HODGES said there was a limit to the available strength of the solution. A saturated solution of sali-

cylic acid makes the collodion dry like a blister. He did not know the exact limit of strength giving good results, but he got no effect whatever from the stronger preparations.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

THURSDAY evening, March 22, 1883. The President, DR. TYSON, in the chair.

DR. J. P. CROZER GRIFFITH exhibited a case of

CHONDROMA OF THE SKULL.

The patient, aged twenty-nine, had been admitted to the Presbyterian Hospital, Philadelphia, June 12th. He was and had been suffering from persistent and very severe frontal headache, and held his head thrown back upon his shoulders to the farthest extent. Examination revealed a tumor the size of a walnut upon the anterior portion of the vault of the skull. This had been recognized by the patient for from one and one half to three and one half months; just how long was uncertain, as his headaches were very much confused. He had suffered from headaches for twelve years. Ophthalmoscopic examination revealed double choked disks. While in the house the tumor grew with great rapidity, and a new growth sprang up beside it. The larger one became soft and tender in spots. The patient became delirious, but coma and paralysis developed only three days before death, nineteen days after admission.

The post-mortem examination revealed a large tumor upon the anterior portion of the vault, and consisting of a soft, red mass, but full of bone spicules, and to the right and connected with it a smaller, dense, hard, white growth. Apparently distinct capsules inclosed and separated the two. The periosteum covered both tumors. The entire growth was irregularly oval, four and one half inches long by four to five broad, and with one and one half inches for its greatest thickness. Removal of the calvarium showed that the greater part of the tumor was internal. Here it was divided into three lobules, of which two resembled the larger tumor in structure, while the third was more like the smaller external growth. The dura mater covered the internal projection. At points it was attached to the brain, and bone spicules penetrated into the brain substance. The length of the entire internal growth was four and one half inches, width four inches, and the greatest depression upon the brain two inches. The tables of the skull within the tumor were destroyed, and the bones around the edge eroded for some distance. The brain structure did not appear to be altered. Microscopical examination showed it to be a reticular chondroma, with a large amount of imperfectly fibrillated and rather translucent connective tissue, forming small meshes in which were cells, some embryonic, but very many cartilage cells. The bone spicules were evidently newly formed, and the older tumor had evidently undergone an ossifying metamorphosis, and then had become vascularized, forming a soft mass in which the spicules were embedded.

Clinically the case was of interest from the existence of so great a depression of the brain with so few signs of disturbance of its functions.

DR. WETHERELL asked what was the condition of the lymphatic system; were the glands enlarged?

DR. GRIFFITH replied that only the post-cervical were affected.

DR. FORMAD had examined the sections about a year ago. It is true, as he says, the predominant cells are those which resemble those of fibro-cartilage. There were, however, many young cells, cells like giant cells, but the majority of the sections had more the appearance of fibro-cartilage. The conclusion to which Drs. Tyson and Formad came at the time was that it was one of the varieties of chondroma. As the specimen appears now it is too soft for chondroma, but seems rather to be a chondro-sarcoma. To this would point the rapid growth and age of the patient. It is certainly not gummatous.

CASE OF METASTATIC PNEUMONIA FOLLOWING PISTOL-SHOT WOUND OF TEMPORAL BONE.

Presented by DR. H. M. FISHER.

The patient, H. G., aged twenty-six, from whom the specimens I present to-night were taken, was admitted to Dr. Levis's wards at the Pennsylvania Hospital, October 31, 1882, suffering from a pistol-shot wound of the right ear. The following clinical notes of the case were kindly furnished to me by Dr. J. H. Wills, resident surgeon to the hospital: —

Examination of the wound with the Nélaton probe showed that the ball had passed through the posterior anterior wall of the external auditory canal, and was firmly embedded in bone, about one inch from its point of entrance. The seat of the ball was distinctly located by the marking of the lead on the porcelain of the Nélaton probe. A prolonged effort to extract the ball was deemed unadvisable on account of its close proximity to the lateral sinus. On account of the inflammatory œdema of the tissues around the wound poultices were applied. Ptosis of the right lid and slight depression of the right corner of the mouth were noticed.

The patient remained in the hospital four weeks, during which time his general health appeared fairly good. He was permitted to go out on a pass, returned the following day with well-marked pleuro-pneumonia, and died ten days later.

The autopsy showed that the ball had penetrated the tympanic cavity, and passed into the jugular fossa, where it was found embedded. There was marked periostitis in the neighborhood of the wound, but no inflammation of the walls of the lateral sinus, nor of the internal jugular vein was noticed.

I am inclined to believe that the infarcts found in the lungs and pleura owed their origin to numerous small thrombi that had been formed in the diploë of the petrous portion of the temporal bone, the venules of the diploë having become plugged as a result of the periosteal inflammation. These thrombi becoming loosened in consequence of increased blood pressure were washed out into some one of the adjacent sinuses, and so into the pulmonary venous circulation. The case is, I think, an interesting one as showing the danger attendant upon such injuries to the temporal bone apart from any incidental injury to the brain or its membranes.

Sections of the heart, liver, spleen, and kidneys, showed marked amyloid infiltration of these organs. Whether such marked changes could be induced in all these organs in the short period that elapsed from the receipt of the injury to the date of the patient's death is a question I would leave to other members of the

Society to decide. At any rate, so far as I could ascertain, no previous history of suppuration was elicited from the patient during the time of his sojourn in the hospital.

Appended are the notes of the microscopical examination of the different organs: —

Lungs. Vessels everywhere greatly dilated, and present numerous infarctions; the alveolar capillaries are also greatly distended and their endothelium is swollen. Inter-alveolar spaces packed with lymphoid cells and embryonic connective tissue cells. The alveoli contain accumulations of epithelioid highly pigmented cells. These cells are generally found associated with exudative corpuscles in a delicate reticulum.

These catarrhal intra-alveolar accumulations show in places a tendency to become organized.

The *pleura* is greatly thickened, its vessels dilated and infarcted.

Heart. Muscular fibres show commencing fatty degeneration, and there is marked amyloid infiltration of the walls of its smaller nutrient vessels.

Liver. Cell-nuclei alone take carmine staining. Islands of liver-cells found in a translucent nearly homogeneous basement tissue. Evident amyloid infiltration of the walls of the finer hepatic arteries and biliary ducts.

Kidney. The Malpighian corpuscles show stiffened capillary loops and little shrinkage from the action of the alcohol. The lumina of the arterioles are patulous.

Homogeneous translucent spaces are seen between the smooth, muscular fibres of these vessels.

Spleen. The lymphoid corpuscles of the pulp appeared to me to present an unduly homogeneous translucent appearance. The smaller vessels show distinct amyloid infiltration of their walls. The Malpighian bodies also show a notable infiltration, having, in some cases, been converted into amorphous masses, which are semi-transparent, and show interspersed among them a few connective tissue nuclei.

CASE OF ERYSIPELAS NEONATORUM.

Presented by DR. H. M. FISHER.

Was called on March 3d to see a colored infant one week old.

The child was said to have presented no sign of indisposition until the day previous to my visit, when it suddenly became much agitated, refused to nurse, and was found to have difficulty in micturition. The tissues of the scrotum and penis were found to be swollen, and in a few hours a faint erysipelatous blush was found pervading their surface.

When first seen the child was apparently moribund. I could detect no radial pulse, its lips were blue, its extremities cold, and it was in a semi-comatose condition. In the hasty examination I made in the small, badly-lighted attic, in which I found the child, I observed but did not attach due importance to the erysipelatous blush I found extending from the scrotum to the lower part of the abdomen. From the history furnished me and from the œdematous infiltration of the legs, thighs, and eyelids, as well as of the scrotum and penis, I was inclined to look upon the case as one of primary acute nephritis, with secondary erysipelatous involvement of the œdematous tissues.

With this view of the case I ordered that the child should at once be placed in a hot bath, and after the bath applied flannels wrung out in hot infusion of digitalis to the patient's loins, and administered a small hypodermic of pilocarpine. Marked temporary improvement followed this treatment. The child emerged for a short time from its semi-comatose condition, cried lustily, and urinated and sweated freely, and marked reduction of the œdema was also noticed.

The improvement was, however, of short duration, the child soon relapsed into its former apathetic condition, and death occurred at eleven P. M.

The autopsy, made by Dr. McIlvaine, resident surgeon, eighteen hours after death, revealed rigor mortis pretty well established.

Œdema of the tissues of the lower extremities, scrotum, and penis, was noticed. There was a livid discoloration of the skin of the anterior inner aspects of both thighs, and slight sloughing of the skin of the lower part of the scrotum. The bladder contained about half an ounce of light yellow, opaque urine. The urine obtained by tapping the bladder, post mortem, showed, on examination, an apparent volume of albumen, equal to about one eighth of the column of urine in the test tube. Microscopically, blood and pus corpuscles were found in abundance, and a few highly granular tube casts.

The kidneys were somewhat congested and lobulated, but their capsule was not adherent, and they did not, at least to the naked eye, present any other evidence of disease.

The liver weighed six ounces, and was highly congested. The spleen weighed one and one half ounces, and was likewise congested, and its surface mottled.

The *lungs* were pretty evenly congested throughout, but were everywhere crepitant and floated on water.

The *heart* weighed two ounces, and presented on the whole a healthy appearance, but its posterior mitral cusp appeared somewhat thickened.

The post-mortem appearances leave, I think, but little doubt that the disease was peripheral in its origin, or, in other words, that the erysipelas was the starting point of it. Probably some comparatively trifling cause, such as a slight abrasion of the skin of the scrotum, sufficed, under the very unfavorable sanitary conditions in which the little patient was placed, to light up the train of the disease with all its complications.

The progress of the disease seems in this particular case to have been unusually rapid. If the mother's statements can be trusted, only thirty-six hours elapsed from its first onset till its fatal termination.

Recent Literature.

Manual of Gynæcology. By D. BERRY HART, M. D., and A. H. BARBOUR, M. A. New York: Wm. Wood & Co. 1883.

This work, which constitutes the January and February issues of Wood's Library of Standard Medical Authors for 1883, is by Professors Hart and Barbour, of the University of Edinburgh. The authorship alone warrants us in expecting a work of value, and a careful perusal thoroughly justifies the expectation. The book shows a great deal of original investigation combined with a careful selection from all the well-known sources of gynæcological knowledge. It has eminently a catholic spirit, and is willing to accept truth, from whatever source it may come. German and American views, in so far as they may be said to be peculiar,

have been impartially weighed, and their merits recognized. The result is a work which will compare favorably with any recent treatise on this branch of medicine, and will be of permanent value to practitioner and student alike.

It is divided into two parts, Part I. treating of the Anatomy, Physiology, and Method of Examination of the Female Pelvic Organs, and Part II. of the various diseases of the different organs described. Dr. Hart's well-known work on the anatomy of this part of the body prepares us to expect that the first part will be particularly original, and we are not disappointed. There are a great many very practical anatomical hints, which cannot fail to throw light on many obscure points. The descriptions are pithy and graphical, especially regional anatomy. There is an exceedingly good account of the perineal body, and we are glad to see that the authors insist on more accuracy in the use of the word perinæum. There is a novel method of considering the structural anatomy of the pelvic floor, which will, we think, tend to simplify our ideas of the way displacements of the various organs are produced. The pelvic floor is spoken of as divided into two segments, the pubic, consisting of all in front of the anterior vaginal wall, and which is movable, and the sacral segment, immovable, and including the posterior vaginal wall, and all behind it. As a result of these views the chief support of the uterus is the compact, unbroken pelvic floor. The sacral segment, of which the perineal body is only a part, holds the pelvic movable segment in its hollow just as a hand held at an angle of sixty degrees to the horizon would hold a small object.

There are a few errors which in so good a work one would like to see corrected. On page 18 the mucous membrane of the cavity of the body of the uterus is said to be about one centimetre thick. It should be one millimetre. So on page 21 the Fallopian tubes are said to vary in length from ten to sixteen centimetres, or three to four inches. This should be four to six inches. On page 29 the bladder is said to consist of the urethra and bladder proper. The urethra is certainly entitled to be considered a separate organ. A short section is devoted to the pelvic floor projection, by which is understood the amount of projection of the pelvic floor beyond the conjugate of outlet, but of what particular value this is we fail to see.

The section on the method of examination is, in general, very good. It seems unnecessary to place the woman on the side to make the digital examination, as it can be done better on the back, and saves a change of position. It is very rarely necessary to use two fingers, and in the majority of women it would cause too much pain. More thorough exploration of the contents of the pelvis is possible if the other three fingers lie in the cleft of the nates. In this way the perineal body is pressed up, and we are enabled to reach higher.

In the chapter on examination with the speculum we are glad to see Sims's speculum so justly recommended. The author says: "The Sims speculum is on the whole by far the most useful speculum; its discovery has been one of the greatest strides in gynæcology."

The use of the vaginal douche is warmly recommended, but sufficient importance is not laid on the necessity of the water being hot, and the patient in the recumbent position.

The consideration of the various diseases of the pelvic organs, if displaying less originality than the anatomical part, shows the same painstaking study. Where there is so little to object to comment seems almost unnecessary. A subject like displacements of the uterus, which has for its basis the anatomical relations of the different organs, would naturally in the hands of the authors present some original views. Displacement of the uterus as a whole, forward and backward in the pelvic cavity, has, we believe, contrary to the statement of the authors, been described by Skene as antrocession and retrocession. The terms ante- and retroposition, as proposed here, seem to us better than those suggested by Skene.

A careful distinction is not made between anteflexion of the neck and of the body, a distinction which is important particularly as regards treatment. Schültze's ingenious explanation of acquired anteflexion from shortening of the utero-sacral ligaments by some inflammatory process is given, and is considered by the writers a very frequent cause.

They call anteversion merely one of the physical signs of metritis, chronic pelvic peritonitis, or pregnancy, and say that it is improbable that mere anteversion causes any distress, and that in a few years it will cease to be considered among uterine displacements. With this view we can hardly agree, for though it undoubtedly is rare, yet it is as much of a displacement as retroversion, and should be so considered.

They do not consider that the Hodge pessary acts as a lever, but that its upper bar gives a *point d'appui* to the posterior fornix, and holds the cervix backward.

The chapter on fibroids has the results of the latest advances in abdominal surgery as applied to the cure of this affection, and very full descriptions of the different methods of operating are given. Electrolysis is not spoken of, though in this country at least very good results have been obtained.

In speaking of carcinoma of the cervix the authors hardly do full justice to the results obtained by amputation of the cervix, whether by the knife and scissors or the galvano-cautery. In Vienna, of one hundred and thirty-three cases operated on by the galvano-caustic wire thirty-one at least are known to have been cured, the date after operation ranging from one year to nineteen. As fair a percentage of recoveries has been obtained with the knife and scissors.

Diseases of the rectum are considered in a short chapter, and brief mention is made at the end of the book of syphilis and chlorosis, subjects which, though not properly coming within the scope of gynæcology, are yet so frequently found with disease of the genital organs that they do not seem out of place.

Taken as a whole we do not know a better book for the practitioner or student in the English language than this one. To cover so much ground in so short a space brevity is of course essential, but it is here combined with so much clearness that the result is perfectly satisfactory. For details on minor points the writers justly expect that other special treatises will be consulted, and to assist the reader to do this a most admirable feature has been introduced, namely, prefacing each chapter with a short notice of the literature of each subject.

The plates are very numerous, and illustrate the text thoroughly. From an æsthetic point of view they are not all that could be desired, but they are clear enough to serve their purpose. We prefer a less

gaudy binding for medical works, but that is a minor consideration. The publishers deserve credit for placing so valuable a work within the means of the profession at large, and we have no doubt that their series for 1883 will sustain the high rank which their former series have attained.

A Practical Treatise on Diseases of the Skin. By JAMES NEVINS HYDE, A. M., M. D. Philadelphia: Henry C. Lea's Son & Co. 1883.

The existence of such an excellent treatise upon diseases of the skin as that of Dr. Duhring renders the *raison d' être* of Professor Hyde's work somewhat a matter of conjecture. The book is a reflection of the teachings of the Vienna school, and this fact gives value to a work which will be read by many possessed of faith in the outward and visible manifestations of an inward and invisible "humor." The classification of diseases is clinical rather than anatomico-pathological, they being grouped primarily according to the regions involved and secondarily according to their pathological characteristics. This is practically a reversal of Hebra's system, and the advantage of it is not evident. The more closely one adheres to pathological anatomy in classification the better, and dermatologists should value their peculiar privilege of being their own pathologists. The chapter upon the Anatomy and Physiology of the Skin is well done, but one piece of quotation (upon page 22) from Heitzmann, describing the structure of the corium, is obscurely expressed.

In discussing the treatment of eczema the frequent association of this disease with, and its partial dependence upon, dyspepsia, constipation, anæmia, debility, and defective assimilation and excretion, as signified by excess of uric acid and urates in the urine, and the necessity for the treatment of such concomitant disorders, are not brought into sufficient prominence, it being merely stated that "it goes without saying that the anæmic patient will be benefited by the chalybeates, the dyspeptic by the remedies calculated to relieve such a condition, the rheumatic by the lithium salts, the diuretics, and alkalies, the cachectic and strumous by cod-liver oil, malt, and similar preparations." The word of warning as to the inefficacy of the internal administration of arsenic in eczema is in place. The external treatment of eczema is well considered, but the importance of a continuous application, with gentle, elastic overlying pressure, of the various ointments is not insisted upon it as it should be. The indications for and the precautions in the application of tar are also not sufficiently marked, the statement that "the tar compound may be applied to the oozing skin" being a hazardous one. The directions for the treatment of acne are direct, plain, and altogether excellent, but here again the attention of the reader is not directed strongly enough to the various coexisting conditions of dyspepsia, debility, and constipation. The general remarks upon syphilis are sensible and to the point, and it is gratifying to see brought into notice the unity of the pathological processes of syphilis, the irritability of its pathological products, and their "tendency to coincident evolution and involution," peculiarities insisted upon by Kaposi, and worthy of more recognition than they generally receive. The great importance of hygiene and tonic treatment, the advantages of local cleanliness both as prophylactic and curative in its effects, and the necessity for minute care of the mouth and teeth are well brought out. The treatment by inunction is given the credit which it deserves, although the directions for carrying out this method of treatment are hardly exact enough.

The ordinary engraving representing the gross appearances of skin diseases, as a rule, conveys but little idea of the same to the observer, and this book presents no exceptions to the rule. It is otherwise with representations of the minute pathological changes, which can hardly be too abundant, if merely to mark the truth that the only sure basis for dermatology is a thorough comprehension of the pathology thereof. The general character of the book is good, and it will furnish a sound guide for the study of dermatology, its most marked defect being the defect of the school from which it derives its inspiration, namely, an insufficient recognition of the causative association between many cases of cutaneous disease and various constitutional disorders, which latter, as well as the skin, should receive direct and explicit attention.

A Treatise on Diseases of the Eye. By HENRY D. NOYES, A. M., M. D., Professor of Ophthalmology and Otology in Bellevue Hospital Medical College, etc., etc. New York: William Wood & Co. 1881. Pages 360. 8vo.

The volume forms a part of Wood's Library of Standard Medical Authors, and is therefore to be obtained only by the purchase of the twelve volumes issued during the year. It is to be regretted that the book had not been published by itself and on its own merits. It is entitled to a place among the best text-books on ophthalmology, and if it had appeared separately would have received a better dress and have been within the reach of a larger circle of readers, as it deserves to be.

In the preface the author speaks of attempting to condense into the limits assigned him. Whether the net result of such condensation is loss or gain may be considered doubtful; at least this much is certain, that diffuseness in a text-book is a bad fault. An account of the general anatomy and physiology of the eye, brief, but, with one exception, fairly sufficient for the purpose intended, opens the work. The exception noted is as to color-blindness. Perhaps the necessary condensation referred to is the explanation of the few lines devoted to this subject. The importance of its discovery among seamen, railroad officials, etc., is recognized; but the statement that Holmgren's test "consists in laying out *a* color and asking the person to put beside it similar shades' is simply misleading.

The results of the extended personal experience of the author are freely given, yet not by any means to the neglect of the literature of the subject, and in accordance with the tendency of modern ophthalmology the connection of ocular lesions with disorders of the brain and general system receives special attention. Affections of the ocular muscles seem to have a particular attraction for the author, and are in general well discussed; for us, however, the prominence and importance given to muscular insufficiency, so called, is somewhat too great. On the other hand, we are glad to observe acceptation of the fact, demonstrated by Schweigger and confirmed by Alfred Graefe, that not only is satisfactory evidence of the existence of *amblyopia ex anopsia* wanting, but the phenomena in question can be more readily explained on other grounds.

Attention should be called to a few errors which must have been due to haste in preparation. Thus, on page 46, it is stated that when an object is placed at the principal focus of a concave glass rays from it cannot pass through the glass because the divergence becomes too great; images in convex glasses are inverted and smaller, if the object be beyond the principal focus; if an object lie at or nearer than the principal focus (of a concave glass) no image can be formed. In the figures given on pages 83 and 105 the visual line and the axis of the cornea are transposed. As a whole the book is to be commended, both to the general practitioner and the specialist.

Medical and Surgical Journal.

THURSDAY, APRIL 12, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number: $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

HAWAIIAN AND NORWEGIAN LEPROSY.

THE authorities of the Sandwich Islands seem to have become thoroughly convinced that segregation is the only sure means of contending against the spread of leprosy, and have lately begun to enforce more strictly than ever before the law providing for the complete and permanent isolation of those affected with the disease. In support of the correctness of this position a gentleman of Kauai, now in Europe, has recently sent from Vienna to the *Hawaiian Gazette* a statement furnished him from Norway, in regard to the decrease of leprosy in that country. In this it is shown from the reports of the medical authorities, that by the end of 1856 there were in Norway 2863 known cases of leprosy, of which large number but 235 were under treatment in hospitals; all the others living in their own homes. Since then isolation has been enforced to a greater and greater degree, and, in consequence, there has been a steady diminution in the number of new cases. By the end of 1866 there were 2704 cases, — a decrease of 159, — and of these 795 were in hospitals. By the end of 1876 there were 2008 known cases; showing a decrease of 696 cases in ten years. Since then the decrease has been regular. Thus, there were in 1877, 1923 cases, in 1878, 1855 cases, in 1879, 1777 cases, and at the end of 1880, 1582 cases; of which 617 were in hospitals, and 965 in their own homes. The decrease of the disease from 1856 to 1880 was, therefore, 1281 cases, or forty-five per cent. This happy result is attributed in a great measure to the isolation resorted to, and as the report states that the isolation was not as perfect as it might have been, it is claimed that if it had been complete, the result would probably have been even better. The number of cured in the same period of twenty-five years is reported as 107; while the number of deaths of those affected with the disease amounted to 4891.

In commending this statement, which it regards as a most important contribution to the subject of leprosy, to the consideration of the island authorities, the *Hawaiian Gazette* states that it is evident that in Norway segregation is regarded as the means by which the disease can be stamped out. "It must be remembered," it goes on to say, "that in Norway the horror and disgust at leprosy are very strong, and that no such contact as is common among Hawaiians would be permitted by the people of their own volition. A very pregnant fact, showing the difference between the two peoples, is this, that during twenty-five years, with a partial segregation, the disease has decreased in Norway from 2863 cases to 1582, or forty-five per cent., while in Hawaii, during the same period of twenty-five years, the disease, instead of diminishing, has increased. As we have frequently pointed out, the blame of this does not rest on the native people of Hawaii; it rests on those who have thwarted the proper carrying out of the law."

Some of the San Francisco papers having published exaggerated statements of the prevalence of leprosy in the Sandwich Islands, and having endeavored to excite alarm by suggesting that there is considerable danger to be apprehended from Hawaiian products, the *Gazette* vehemently protests against such reports as being causelessly detrimental to the prosperity of the islands. It claims that they are entirely without any foundation in fact, and states positively that lepers are never employed by planters or merchants, who are much too careful of their own interests to do so. It is only among the Hawaiian homes that the disease is found, and where it has been steadily propagated in families; and it is for the relief of the native population that the stricter measures for isolation, which have at length become so urgently demanded, are now to be enforced. As far as can be judged, it would seem that the authorities are really making an honest and earnest effort to carry out this good work, and it is to be hoped that it will be steadily persevered in and will receive the coöperating support of the people at large to such an extent that the scourge which has so long afflicted them may gradually be entirely eradicated from the islands.

MR. WATSON CHEYNE AND THE TUBERCLE BACILLUS.

THE report of Mr. Watson Cheyne to the newly constituted Association for the Advancement of Medicine by Research [1] is of much interest and value. Mr. Cheyne has lately visited the laboratories of Professor Toussaint, of Toulouse, and of Dr. Koch, of Berlin, with a view of seeing their methods of investigation and the results which they have obtained. He thought it advisable in the first instance to repeat some of the experiments which have led observers to object to the view of the specific origin of tuberculosis, and to hold

[1] London Lancet, March 17, 1883.

that in rodents, at least, any irritation might produce that disease. These experiments satisfied him that tuberculosis cannot be excited in rodents by simple irritants where antiseptic precautions are taken, but that certain micro-organisms are necessary. It will be remembered that in some of the former experiments of Burdon-Sanderson, Formad and others tuberculosis was induced in certain animals, as rabbits, rats, etc., by introducing non-infectious matter, as bits of glass, cork, and thread, under the skin, and the conclusion derived from these experiments was that irritating substances of any kind may be the exciting cause of tubercle formation. Cheyne shows (as Koch had previously shown) that no such result is obtained when there has been thorough disinfection of the instruments employed, and complete isolation of the animals from each other.

In opposition to the view of Toussaint, who holds that micrococci are the cause of tubercle, Mr. Cheyne found that when pains are taken to inoculate his animals with micrococci alone, the products of a careful culture from which all bacilli were excluded, in no instance did tuberculosis occur.

A number of tuberculous organs from animals experimented on by Toussaint were also obtained, some of the animals having become tuberculous after injecting the micrococcal fluid. Careful examination of these organs has shown the presence, often in large numbers, of the tubercle bacillus described by Koch, but no micrococci have been found. He also found that the carbolic acid solution used by Professor Toussaint for disinfection is destructive to micrococci, while it is ineffectual against the spores of bacilli, and the inference is that Professor Toussaint's inoculative fluid contained the spores of Koch's bacillus.

Mr. Cheyne has made experiments with cultivations of tubercle bacilli obtained from Dr. Koch. Twelve animals were inoculated with these organisms, and all of them became tuberculous, and that more rapidly than after inoculation of tuberculous material. The tubercles in these cases were infective, and caused tuberculosis in other animals. On examination of tuberculous material Koch's bacilli are always found, though in varying numbers. About eighty organs of tuberculous animals and thirty-six cases of human tuberculosis were examined, and in all of these without exception tubercle bacilli were found. The inoculation of these bacilli is more certain and more rapid in its effect than the inoculation of tuberculous material from any source; and various facts are pointed out leading to the conclusion that, in these bacilli, we have the virus of acute tuberculosis caused in the lower animals by the inoculation of tuberculous material.

Mr. Cheyne concludes from his experiments that acute tuberculosis in man is identical with the disease produced in the lower animals by the inoculation of tuberculous material, and that in both cases the bacillus is the cause. As to the precise relation of these organisms to phthisis and scrofulous diseases generally, we have as yet no clear knowledge. He brings forward certain facts as to the mode of distribution of the bacilli in the tissue, and their relation to the histological elements, which are of the greatest interest. These are here briefly summarized. Two distinct structures have been described as tubercles in the lungs of rodents, namely, nodules of lymphatic tissue in close proximity to the vessels and bronchi, and nodules which are largely made up of epithelioid cells. If a case of commencing artificial tuberculosis be examined it will be found that bacilli are only present in the latter nodules, and they are never found in the former unless epithelioid cells are found there as well. On careful investigation of these nodules it is found that bacilli are only present in the epithelioid cells themselves. Around these cells the tissue becomes inflamed, and converted more or less completely into granulation tissue. As the tubercle becomes older the epithelioid cells at the centre undergo caseous degeneration, and in this case the bacilli are present in the caseous mass, but are often best seen at its margin, where epithelioid cells still exist, but they may also be found penetrating into the inflammatory tissue. The giant cells of tubercle can be distinctly traced as originating from epithelioid cells, especially from epithelioid cells containing bacilli. As to the origin of these epithelioid cells in the lung, the great majority are derived from the alveolar epithelium. The bacilli escape from the blood-vessels and lymphatics and pass into the alveolar epithelium, where they grow and cause multiplication of the epithelial cells until the alveolus becomes completely filled with them. These epithelioid elements are occasionally derived from the endothelium of the blood-vessels and lymphatics, and in the case of tubercle of the liver, from the liver cells; and the accumulation of these elements in the centre of the nodules leads to obliteration of the vessels, and to fusion of neighboring nodules.

In rapid phthisis the alveoli are distended with caseous material, which is simply degenerated epithelioid cells; where the disease is in its incipiency these cells are clearly defined. The granulation cell structure is considered due to surrounding inflammation. By and by the walls of adjacent alveoli disappear, and thus cavities are formed containing caseous material surrounded by epithelioid cells and inflammatory tissue. The bacilli are always found in enormous masses at the free margin of the cheesy material. In fibroid phthisis the bacilli are, as a rule, extremely few, but where cavities exist, and in the centre of a caseous mass, they may be found in considerable numbers. They may be sometimes found in the giant cells.

From these facts it would seem that, when the tubercle bacilli reach the alveolus of a lung which is in a suitable condition for their growth, they develop in the epithelial cells lining the alveolus, which soon becomes filled with the proliferated products, neighboring alveoli become affected, and the morbid process spreads. The further result will depend on the number and rapidity of growth of the bacilli, and on whether the patient is a good soil for their development. If they develop well we have caseous pneumonia; if they grow slowly and with difficulty we have fibroid phthisis. In the former case, Mr. Cheyne says, the alveoli become early distended with epithelioid

cells, inflammation of the walls of the alveolus ensues, the epithelioid cells undergo caseous degeneration, and atrophy or sloughing of the walls of the alveolus occurs. Infection of neighboring parts of the lungs occurs by continuity and also by coughing up and re-inhalation of the bacilli in other parts of the lungs. In this rapid phthisis, fibroid formation around the alveoli takes place only imperfectly, and the lung rapidly breaks down. In the case of fibroid phthisis the bacilli are few and grow only with difficulty. Thus fibrous formation occurs extensively, and giant cells are entangled in the fibrous tissue. In parts, however, the process may be more rapid, and there cheesy masses are formed, which may lead to breaking down of the lungs and the formation of cavities.

Mr. Cheyne's investigations have excited the greatest interest in medical circles on the other side of the water, and certainly throw light on this obscure pathological question.

THE CAUSES AND PREVENTION OF THE POLLUTION OF STREAMS. THE KING OF SAXONY'S PRIZE.

DURING the International Fishery Exhibition in Berlin in 1880, the King of Saxony offered a prize for the best essay on "The pollution of water courses and the prevention of it, with a special view to the life and health of fish." None of the essays handed in were deemed worthy of a prize. In consequence of this, and at the request of the German Fishery Association, his Majesty has again offered his prize for competition, placing its bestowal in the hands of the Committee of the German Sanitary Exhibition, at the same time altering somewhat the subject for treatment by the competitors. Essays should be addressed to Dr. Paul Boerner, 8 Burggrafen Strasse, Berlin, who is Deputy Secretary of the Sanitary Exhibition so unfortunately interfered with last May by the burning of some of its buildings, and at whose request we give our readers the terms and conditions accompanying the offer of the prize, which consists of a silver centre-piece to be shown at the Sanitary Exhibition.

1. The time for receiving essays expires December 31, 1884. The subject, as stated in the English translation of the German, is the following: —

(*a.*) Which are the sanitary, industrial, agricultural, and other interests, including those of fishery, endangered and injured by the pollution of water courses, as effected partly by the utilization of them for various purposes, partly by the influx of refuse and sewer waters?

(*b.*) Precise statement of chemical materials, machines, architectural constructions, considered to be the most effectual means against such detriments, and demonstration of chemical and economical practicability of propositions relative thereto. The addition of drawings, models or preparations, serving to give a better explanation will, in certain cases, be indispensable.

2. Monographs on single divisions of the theme shall not be excluded from competition.

Inventions of an elder date shall likewise be admitted, provided they are reviewed from a new point of view.

A patent already issued on a process shall not be counted a hindrance to the competition of the process.

3. In case of special experiments and trials necessary for the proper estimation of a process, the jury is authorized to adjourn the verdict for a time not exceeding a twelvemonth.

4. The competition is international. The manuscripts are required to be drawn up either in the German, or in the French, or in the English language.

Anonymous sendings are allowed. They have to bear a motto, and must be accompanied by a sealed envelope, showing the same motto, and containing name of competitor. The jury is authorized to open the envelope if an intercourse wth the competitor should become desirable.

5. Every sending remains the property of the sender, to be reclaimed within six months after the publication of the verdict. The treatise carrying the highest award shall be published within a twelvemonth after the distribution of prizes.

There will also be an award of six hundred marks granted by the German Fishery Association, besides two more prizes of three hundred marks each, stipulated by the Committee of the German Sanitary Exhibition.

The subject selected for competition is one of supreme importance in all thickly settled countries in which manufactures are extensively carried on, and is a worthy one for which a ruler should offer a prize. Nowhere is a proper solution of the questions involved of more vital and growing importance than in the State of Massachusetts. We fear, however, that our people at large are only just beginning to really awaken to this fact, and that we must be regarded as learners rather than as teachers in this matter.

MEDICAL NOTES.

— Brigadier-General Joseph K. Barnes, retired, late Surgeon-General United States Army, died at Washington, last week, of Bright's disease. His death, it is said, was due, in part, to his efforts while in attendance upon President Garfield. Since then he has never been well. Last summer's developments concerning the management of the Soldiers' Home, also probably accelerated his dissolution. During the past Congress an ineffectual effort was made to retire him as major-general in return for his services during the Garfield illness. The following officers acted as pall-bearers: Generals W. T. Sherman, Edmund Shriver, D. H. Rucker, W. H. Emery, A. Baird, M. C. Meigs, R. C. Drum, R. Macfeely, N. W. Brown, C. H. Crane, C. M. Wilcox, and Joseph E. Johnston.

— The nurse who administered suppositories by the mouth is matched by another, who, finding her charge objected to taking more than three of his leeches raw, considerately fried the rest for him.

— The *Lancet* (March 24th) publishes statistics showing the danger of overtraining among the university boat crews. It says, "The superfluous fat having been removed from the body of a young adult by hard work and regulated diet, the weight of the individual should either remain stationary or increase; and if a man continue to lose weight, and such loss be not due to decrease of fat, it is almost certainly due to the wasting of other tissues which are needed for use in any athletic contest." A careful study of the weights of the oarsmen who took part in the University boat races for the past three years, shows that the winning crew has gained in weight at the end of its training, while the losing crew has afforded evidence of overtraining by a failure to maintain the body weight. Thus, in 1881, Oxford, the winning crew, made a gain of ten and one half pounds during the last two weeks before the race, only one of its eight members showing a decrease during that time; while every member of the Cambridge crew lost weight, the total loss in two weeks being fifteen and one half pounds. In 1882, the Oxford men all gained in weight for the eleven days preceding the race, the aggrégate being seventeen pounds; they won by seven lengths, while the Cambridge crew lost sixteen pounds in the same time, only two of their number making any gain, and that averaging but one and one fourth pounds each. In 1883, Oxford again won, and only one man lost weight during the eleven days before the race, the other seven gaining in all fifteen and one half pounds; and in the same time seven members of the Cambridge crew lost thirteen pounds, the other man gaining two pounds.

— The secretary of the Smithsonian Institution gives notice that Dr. D. W. Prentiss has been invited to deliver a course of lectures upon Materia Medica, in connection with the department of Materia Medica of the National Museum. This course, which will consist of eight lectures and will be illustrated by material from the Museum, will be delivered at four o'clock on successive Saturday afternoons, beginning Saturday, April 7th. These lectures are free. Persons desiring to attend may obtain tickets by application through the mail or in person to Mr. S. C. Brown, Registrar of the Museum, at his office in the northwest pavilion of the new building.

NEW YORK.

— The latest addition to the institutions for medical teaching in the city is the "College of Midwifery," which has just been opened in connection with the Metropolitan Dispensary, on 7th Avenue, near 34th Street. Organized and incorporated for the purpose of affording practical and scientific instruction in the obstetric art, it is said to be, with two exceptions, the only institution of similar design in America. The course of instruction will consist of lectures in English (though the French, German, or Spanish language will be used when necessary), with demonstrations, recitations and practical teaching, in subjects involving manipulations. The students will be taught practical midwifery at the bedside, and then have a sufficient number of cases allotted to their care, with the privilege of summoning one of the instructors should difficulties arise. The Metropolitan Dispensary, which occupies a portion of the college building, will furnish abundant clinical material in its outdoor department, and the instructors in the college are members of the Dispensary staff. Each session (of which there will be three during the present year) comprises a three months' course, and four evening lectures a week will be given in the following branches: anatomy, physiology, midwifery and diseases incident to pregnancy and confinement, including the care and management of the child. Each candidate for graduation and diploma will be required to pass a satisfactory examination, before a board of censors, in the several branches taught in the lectures during the session. The faculty will consist of Drs. Benjamin F. Dawson and P. F. Mundé, censors, Dr. James O'Reilly, instructor in midwifery, Dr. John Alsdorf, instructor in physiology, Dr. Thomas H. Wilcox, instructor in diseases of women, and Dr. Jacob Hartmann, instructor in anatomy. The spring session commenced April 9th.

— The graduating exercises of the training school for nurses of the New York Hospital were held at the hospital, April 5th. The annual report showed that since the establishment of the school in 1877 fifty-two nurses have been graduated. On this occasion there were nine graduates, and a short address was made to them by Dr. William H. Draper, one of the attending physicians of the hospital, who also presented each with a diploma and a gold badge.

— The authorities of the notorious "United States Medical College," which some time ago was pronounced by the courts to be without legal standing, having carried the matter to the Supreme Court, the latter has now finally disposed of the claims of the institution by denying that it is or ever was incorporated as a medical or surgical college, or that it possesses the powers or franchises of one. Accordingly it is restrained from issuing diplomas to students, and a copy of the judgment against Robert A. Gunn and others, originators of the college, obtained by the Attorney-General, has been served on the Board of Health. In consequence of this a notice has been posted in the Bureau of Records of Vital Statistics, to the effect that certificates of death signed by graduates of the college must be rejected, and the cases referred to the coroner.

— A bill has been introduced by Mr. Miller into the legislature abolishing the Commission of Charities and Correction, and dividing its duties among four new departments, namely: one for the care of dependent children, one for the care of the insane, one for the care of the sick and dependent, and one for the criminals and able-bodied paupers. This would, no doubt, be a great improvement over the present system, though it is perhaps a question whether there is any real necessity for the separation of the first and third classes distinguished in the bill. By the provisions of the act the Commissioner for the Care of Dependent Children is given power to commit children to private institutions which receive public aid, as well as to public institutions, and the power of committal, except for crime, is

taken away from all magistrates; while the Commissioner for the Care of the Sick and Dependent is given authority to transfer persons whose physical disability has resulted from their own vices to the workhouse after they are cured, until the products of their labor shall have reimbursed the cost of caring for them. There is need of reform in the administration of the public institutions of the city, and it is a strong recommendation of the present bill that it is favored by the State Charities Aid Association. In the memorial in its favor signed by Mr. Charles Fairchild, the president of that body, it is set forth that the changes of subordinates in the departments now amount to between forty and fifty per cent., and that in one institution in which a staff of one hundred and twenty-four is maintained, there have been forty changes in a single year. The conclusion, thereupon, is, "that either appointments or removals were too carelessly made."

PHILADELPHIA.

— It may be of interest, in connection with the adoption of a recent ordinance for the regulation of plumbing in Boston, to report that the public mind has been directed to the same subject in Philadelphia. By the direction of City Councils, a committee of twenty-one citizens, consisting of seven plumbers, seven architects, and seven physicians and citizens, was recently appointed to consider the best means for securing good plumbing and house drainage, and other sanitary questions growing out of these. This committee, after a number of meetings, has just transmitted to Councils a draught of a proposed ordinance for regulating plumbing and house drainage, and for the registration and licensing of plumbers in this city. The scope of the bill is explicitly stated in the title just given. In order to accomplish these objects, the committee recommend the creation of a sanitary commission, upon which shall be conferred the power of acting within the spirit of the law; and also requiring the appointment of a number (eight) of district inspectors, who shall examine and report upon the plumbing and drainage of new buildings, and also upon complaints regarding others. The expenses of the board to be paid out of a fund raised by a small tax or fee upon properties examined. As there are about four thousand new houses erected each year in Philadelphia, the expense to each need not be more than from two to three dollars. It is believed that this act will be adopted.

— At the Commencement of Jefferson Medical College held April 2d, Professor DaCosta delivered a very appropriate valedictory address (which will appear in the forthcoming issue of the *College and Clinical Record*). The graduating class numbered 227.

— The Medical Department of the University of Pennsylvania will hold its Commencement April 10th, when ninety will receive the degree of M. D., and thirty-six that of D. D. S.

— A plan for the education of women in the Department of Arts of the University of Pennsylvania was reported to a meeting of the Trustees on the 2d inst., by Frederick Fraley, Esq., from the committee of that department. It embodied a scheme by which women are to receive the same course of instruction as the male students, but at a different place and time; they are to be examined by the same examiners as the men, go through the same course of examination, and receive degrees on the same terms as the male students. The report will be acted upon at the next meeting of the Board. The Trustees also took an important step in electing Dr. Rush Shippen Huidekoper professor of veterinary anatomy and pathology, which marks the beginning of a veterinary school at the university.

Miscellany.

PROFESSOR SIMPSON ON BASILYSIS.

IN the March number of the *Edinburgh Medical Journal* Professor Simpson presents a communication on basilysis as a substitute for other methods of diminishing the head in appropriate cases of dystocia. Previous articles by the same author have recommended the method, and the present one contains the account of its successful employment in a case of hypertrophic elongation of the cervix. The woman had some pelvic deformity, and at the time she was seen, about ten hours after the labor began, the os projected two inches from the vulva; it admitted two fingers, and at a full finger's length from the os the vertex was felt presenting, with membranes intact. There was evidence that the fœtus was dead, and while the lips of the os remained half an inch thick, the lower part of the body and the upper part of the cervix were becoming dangerously thinned.

The occiput being to the right and a little posterior, the basilyst was used to perforate the left parietal and upper edge of the left temporal bones, and the point of the instrument was then guided to the anterior part of the base, in front of the sella turcica, and screwed in to the shoulder. When the blades had been separated it was felt that the structures were broken up. To effect more complete comminution the instrument was again applied just behind the sella turcica, and on its withdrawal the base of the skull felt relaxed. No blood escaped during this proceeding, showing that the child was dead, and the maternal structures were not injured. Some brain matter escaped during the operation, and the rest was evacuated by douching. Traction on the head was made by the fingers, support and counter-pressure being applied to the lips of the cervix during its extraction. The head was delivered easily, but difficulty was experienced with the shoulders, the circle of the os fissuring in different directions, especially at the left side, where the parts were somewhat thin. The distention by the shoulders also wounded the left nympha and adjacent portion of the vestibule anteriorly and the right posteriorly. The cervix was well douched with carbolized water, and digital pressure applied to the wound of the left nympha in order to stop the bleeding. The placenta was expelled in about twenty minutes, and shortly after some (post-partum) hæmorrhage occurred. This, though not in itself excessive, brought the patient into a very critical condition, from which appropriate treatment ultimately rescued her, and she made a good recovery.

The basilyst, as now constructed by Professor Simp-

son, is an exceedingly simple instrument, consisting essentially of two blades of equal thickness, which are introduced in close apposition. They thus form a cylindrical shaft, at the pointed extremity of which is cut a screw-thread.

The encephalon may be thoroughly churned up and the opening enlarged by separating the blades after the cranium has been perforated. The skull is then washed out, and the screw-tip directed so as to pierce the ethmoid and sphenoid, or (as in this case) also the base of the skull further back, so that the whole base may be broken up. After the operation, the thumb passing round the forehead at the level of the orbital processes, and the fingers passing about the occiput, the tips of the thumb and middle finger met, showing that the head would then pass through a canal with a diameter of only two inches. In this case the diseased and friable tissues of the mother contra-indicated the use of forceps. The author claims for his instrument that it does not cost more than the perforator in common use amongst us; and that it has the immense advantage that, whilst it as easily and effectively perforates the vault of the cranium, it can further break up the unyielding base, and thus in many cases render us independent of any further head-crushing implement or apparatus.

FEMALE HALLUCINATIONS.

THE *British Medical Journal* (March 20th) directs attention to certain remarkable delusions to which females of unstable nervous equilibrium are subject, either through hysteria or through similar disorders of the nervous system. Charcot and Bourneville give instances of the extraordinary self-deceptions that are frequent amongst hysterical patients. Dr. Legrand du Saulle, physician to the Salpêtrière, Paris, describes in his standard work, *Les Hystériques*, some remarkable cases of hallucination, where females labored under the belief that they have been struck or stabbed by others, even after having inflicted blows and wounds upon themselves. In one instance a young woman was found by her husband lying on the floor of her room in a fainting fit, her face covered with blood. On reviving from her swoon, she stated that she had been attacked by armed men; the Paris newspapers related the case, and within three weeks two similar events occurred in the French metropolis. All these cases were proved to have been fabricated by the supposed victims. A young girl wounded herself slightly with a pistol. She gave the police authorities the most minute details about an imaginary assassin, who according to her account fired the weapon; but she was found to be highly hysterical, and it was proved that she had willfully wounded herself. In a third case in Dr. Du Saulle's experience, a young woman was found in a railway carriage, stabbed in the left side. The incident caused great excitement, but it was proved, contrary to her assertions, that she had inflicted the wound herself, and was a hysterical subject. A housemaid was found lying behind a door, bound, gagged, and covered with bruises. She stated that she had been brutally attacked by two burglars with blackened faces, but she was a highly hysterical woman, and there appears to have been strong evidence that she had contrived to tie her own hands and to gag and bruise herself. Perhaps the strangest case of all occurred in M. Tardieu's practice. A young lady, living at Courbevoie, wished to make herself an object of public interest by passing as a victim of a political conspiracy, which she pretended to have discovered. One night she was found in a state of the greatest mental perturbation, at the door of her apartment. She could not talk; but stated in writing, that she had been attacked outside her own house by a man, who had attempted to garrote her, at the same time striking her twice with a dagger. Only the lady's clothing was injured, and the body of her dress and her corset were found to be cut through, but at different levels. She tried to make out that the attempt at strangulation had caused dumbness. M. Tardieux remarked, in her hearing, that this infirmity rapidly disappeared when produced under circumstances of this kind. She soon managed to regain her speech; and, in a short time, admitted that the whole narrative had been developed out of her inner consciousness. The constant fear of molestation from enemies, especially if based on reasonable grounds, is particularly liable to predispose nervous or excitable subjects to extraordinary delusions of this kind.

LABOR COMPLICATED BY VAGINAL OCCLUSION.

A CORRESPONDENT of the *British Medical Journal* (March 10th) describes a case in which pregnancy supervened on an attempt to occlude the vagina by operative measures, as follows: The patient had long suffered from an extensive vesico-vaginal fistula following a severe confinement, in fact, a large chasm was formed between the two cavities, which caused, of course, a great amount of distress and inconvenience. Mr. Bryant, of Guy's Hospital, was consulted, who, finding the loss of substance too great to allow of any reasonable hope of success from the ordinary operation, determined upon forming a complete septum across the vagina, and so preventing the continual drain of the urine through the latter, the menstrual discharge having to make its escape through the bladder and urethra. This had to be attained by a series of operations, three of which had been performed, with the result of forming a firm and almost complete partition, a small opening, scarcely sufficient to admit a crow-quill, remaining close to the wall of the vagina on the left side. A slight operation only was required to make the case a complete success, and this it was intended shortly to effect. In the mean time, unfortunately, the patient became pregnant, and at full term labor commenced. When the presenting part, which was the head, began to press upon the septum, a grooved director was passed above the latter, between this and the head of the child, through the small opening, and the septum was divided almost completely across by a bistoury. The labor proceeded very satisfactorily, the child was born without difficulty, and the convalescence was most favorable. The original design of Mr. Bryant's operation was, of course, frustrated by this untoward event.

— "Father," said Johnny, "this paper says that 'many prominent citizens are now ill with pneumonia and kindred diseases.' What is kindred diseases, father?" "Why, my son," said Smith, "a kindred disease is — is — why — yes, yes! a kindred disease is one that runs through an entire family — kindred, relatives, you know. Surprised you did n't know that, Johnny."

REPORTED MORTALITY FOR THE WEEK ENDING MARCH 31, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	727	262	17.42	23.53	4.16	3.25	.26
Philadelphia	846,984	425	118	16.25	11.28	6.35	1.18	2.12
Brooklyn	566,689	286	98	20.30	22 40	5.25	6.30	.35
Chicago	503,304	250	136	25.20	12.80	6.40	5.20	1.20
Boston	362,535	188	62	12.19	21.26	.53	1.59	—
St. Louis	350,522	141	56	23.14	11.36	10.15	4.97	—
Baltimore	332,190	182	69	20.90	6.60	6.60	5.50	2.20
Cincinnati	255,708	145	54	16.56	31.74	.69	5.52	—
New Orleans	216,140	188	39	43.46	10.17	.53	1.06	36.57
District of Columbia	177,638	80	24	11.25	23.75	5.00	3.75	1.25
Pittsburg (1883)	175,000	71	26	12.67	9.86	1.41	1.41	—
Buffalo	155,137	53	15	11.34	15.12	1.89	1.89	—
Milwaukee	115,578	40	17	17.50	12.50	5.00	7.50	—
Providence (1883)	116,755	—	—	—	—	—	—	—
New Haven (1883)	73,000	36	9	11.08	16.62	8.31	2.77	—
Charleston	49,999	28	8	—	1.44	—	—	—
Nashville	43,461	40	15	32.50	22.50	5.00	2.50	9.00
Lowell	59,485	25	4	20.00	16.00	4.00	—	—
Worcester	58,295	22	14	13.62	31.78	9.08	—	—
Cambridge	52,740	25	7	16.00	20.00	8.00	4.00	—
Fall River	49,006	22	11	—	36.32	—	—	—
Lawrence	39,178	15	4	26.66	20.00	—	—	—
Lynn	38,284	20	6	8.00	16.00	4.00	—	—
Springfield	33,340	16	8	18.75	—	—	—	—
Salem	27,598	5	—	80.00	—	40.00	20.00	—
New Bedford	26,875	17	3	—	23.52	—	—	—
Somerville	24,985	17	3	17.64	11.76	11.76	—	—
Holyoke	21,851	15	7	33.33	33.33	13.33	—	6.66
Chelsea	21,785	10	—	—	20.00	—	—	—
Taunton	21,213	8	2	12.50	12.50	—	—	—
Gloucester	19,329	1	—	—	—	—	—	—
Haverhill	18,475	7	3	—	—	—	—	—
Newton	16,995	6	—	16.66	16.66	—	—	—
Brockton	13,608	7	2	14.28	57.12	14.28	—	—
Newburyport	13,537	10	2	—	20.00	—	—	—
Fitchburg	12,405	6	2	16.66	16.66	—	—	—
Malden	12,017	5	1	—	20.00	—	—	—
Twenty-two Massachusetts towns	—	73	19	6.85	12.33	—	4.11	—

Deaths reported 3212 (no reports from Providence): under five years of age 1106: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 613, lung diseases 593, consumption 500, diphtheria and croup 156, scarlet fever 106, small-pox 94, typhoid fever 56, diarrhœal diseases 35, measles 34, malarial fevers 31, whooping-cough 27, cerebro-spinal meningitis 27, erysipelas 24, puerperal fever 23. From *typhoid fever*, Philadelphia 20, New York seven, Chicago six, Boston, Pittsburg, and Lawrence, three each, Brooklyn, St. Louis, and Lowell, two each, Baltimore, Cincinnati, New Orleans, District of Columbia, Cambridge, Springfield, Taunton, and Newton, one each. From *diarrhœal diseases*, New York 11, Chicago nine, Brooklyn and St. Louis three each, Baltimore and Cincinnati two each, Boston, New Orleans, Springfield, Holyoke, and Fitchburg one each. From *measles*, New York 20, Cincinnati four, Brooklyn, Boston, and Nashville two each, Chicago, Baltimore, Salem, and Peabody one each. From *malarial fevers*, New York 15, New Orleans eight, Brooklyn five, St. Louis three. From *whooping-cough*, New York seven, Brooklyn five, Philadelphia, Chicago, and Cincinnati four each, Baltimore, Pittsburg, and Springfield one each. From *cerebro-spinal meningitis*, New York eight, Baltimore six, Chicago, St. Louis, Pittsburg, and Lowell two each, Milwaukee, Nashville, Worcester, Lawrence, and Holyoke one each. From *erysipelas*, New York, Philadelphia, and Brooklyn four each, Chicago and Cincinnati three each, Buffalo, Lynn, Somerville, and Northampton one each. From *puerperal fever*, Chicago six, New York, Brooklyn, and Nashville three each, Boston and St. Louis two each, Baltimore, Cincinnati, Pittsburg, and Milwaukee one each.

Thirty-one cases of small-pox were reported in Baltimore, St. Louis 11; diphtheria 23, scarlet fever 21, typhoid fever five in Boston; scarlet fever 29, and diphtheria five in Milwaukee.

In 44 cities and towns of Massachusetts, with an estimated population of 1,219,757 (estimated population of the State 1,922,530), the total death-rate for the week was 22.21 against 19.14 and 19, for the previous two weeks.

For the week ending March 17th, in the Swiss towns, population 494,390, there were 52 deaths from consumption, lung diseases 38, diarrhœal diseases 10, diphtheria and croup eight, whooping-cough two, erysipelas two, typhoid fever two. The death-rates were, at Geneva 11.3, Zurich 16, Basle 29.4, Berne 33.9.

In the 28 great towns of England and Wales, with an estimated population of 8,620,975, for the week ending March 17th, the death-rate was 26. Deaths reported 4,300: acute diseases of the respiratory organs (London) 548, whooping-cough 119, measles 78, scarlet fever 67, fever 61, diarrhœa 39, diphtheria 28, small-pox (London and Hull one each, Newcastle three, Birmingham two) seven. The death-rates ranged from 18.7 in Portsmouth to 37.1 in Preston; Brighton 19.2; Bristol 24; London 24.5; Leeds 25.5; Sheffield 27.2; Liverpool 34.3. In Edinburgh 23; Glasgow 33.7; Dublin 35.4.

The meteorological record for the week ending March 31st, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
March, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 25	29.965	36	45	25	54	43	53	50	W	NW	NW	15	28	12	C	C	C	—	—
Mon., 26	29.941	39	49	32	69	65	73	69	NW	E	NE	10	12	12	C	C	O	—	—
Tues., 27	29.816	38	42	35	89	82	89	87	NE	NE	NW	15	10	5	R	O	R	—	—
Wed., 28	29.822	37	44	29	72	46	60	59	NW	NW	NW	13	20	11	C	F	C	—	—
Thurs., 29	29.985	32	42	24	64	46	60	57	NW	W	NE	12	12	4	C	C	C	—	—
Fri., 30	29.846	32	37	27	78	78	78	78	NE	SE	SW	3	6	5	O	R	C	—	—
Sat., 31	29.944	34	46	25	68	61	68	66	NW	SE	N	8	8	12	C	O	C	—	—
Means, the week.	29.903	39	44	28				67										19.10	.2

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, JANUARY 1, TO MARCH 31, 1883.

BAILHACHE, P. H., surgeon. Detailed as member of Board for the Examination of Officers of the Revenue Marine Service. March 27, 1883.

MURRAY, R. D., surgeon. To proceed to Vicksburg, Miss., as inspector. March 24, 1883.

PURVIANCE, GEORGE, surgeon. To proceed to Cleveland, Ohio, to investigate management of hospital. January 22, 1883. Granted leave of absence for seven days. February 8, 1883.

AUSTIN, H. W., surgeon. To proceed to Gallipolis, Ohio, as inspector. January 9, 1883.

FISHER, J. C., passed assistant surgeon. Detailed as member of Board for the Examination of Officers of the Revenue Marine Service. March 27, 1883.

CARTER, H. R., passed assistant surgeon. To proceed to New Orleans, La., for temporary duty. Thence to San Francisco, Cal., for duty. February 7, 1883.

PORTER, F. D., passed assistant surgeon. Granted leave of absence for thirty days. February 10, 1883.

GUITERAS, JOHN, assistant surgeon. Granted leave of absence for thirty days. January 19, 1883.

WHEELER, W. A., assistant surgeon. To proceed to Chicago, Ill., for duty. January 27, 1883.

ARMSTRONG, S. T., assistant surgeon. To proceed to Key West Fla., for temporary duty. February 1, 1883.

BENNETT, P. H., assistant surgeon. To proceed to Charleston, S. C., for temporary duty. February 19, 1883.

RESIGNATION.

PORTER, F. D., passed assistant surgeon. Resignation accepted to take effect March 31, 1883. February 10, 1883.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 30, 1883, TO APRIL 6, 1883.

HAMMOND, JOHN F., colonel and surgeon. Granted leave of absence for six months on surgeon's certificate of disability, with permission to go beyond sea. (Paragraph 6, S. O. 75, A. G. O., April 2, 1883.)

HAMMOND, JOHN F., colonel and surgeon. To be relieved from duty in the Department of the East, and to report by letter to the Surgeon-General U. S. Army. (Paragraph 7, S. O. 75, A. G. O., April 2, 1883.)

CORRECTION.

IN the report of the remarks of Dr. Stedman at the last meeting of the Boston Medico-Psychological Society, the proceedings of which were published in the JOURNAL of April 5th, I omitted to state that the patient spoken of had "never had a previous attack, had not been in the habit of drinking liquor, and had a good family history." WALTER CHANNING.

April 10, 1883.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — The next meeting of the Boston Society for Medical Observation will be held at the Medical Library, 19 Boylston Place, on Monday evening, April 16th, at eight o'clock. Dr. J. Stedman will report three cases of Post-Mortem Diagnosis. (*a.*) Sudden death from serious disease of the brain without sufficient symptoms during life to suspect the grave conditions existing. (*b.*) A recent case with an obscure history preceding death. (*c.*) Serious and obscure abdominal and pelvic disease with recovery. Death fourteen years later.

CHARLES H. WILLIAMS, M. D., *Secretary.*

SUFFOLK DISTRICT MEDICAL SOCIETY. — The last meeting of the year of the Obstetrical Section will be held at 19 Boylston Place, on Wednesday evening, April 18th, at eight o'clock. Dr. E. A. W. Harlow will report some cases of Face Presentation.

J. B. SWIFT, *Secretary.*

BOOKS AND PAMPHLETS RECEIVED. — A Manual of Chemical Analysis as Applied to the Examination of Medicinal Chemicals. Third edition. Revised and enlarged. By Frederick Hoffmann, A. M., Ph. D., and Frederick B. Power, Ph. D. Philadelphia: Henry C. Lea's Son & Co. 1883.

Circulars of Information of the Bureau of Education. No. 6. 1882. Technical Instruction in France. Washington: Government Printing Office. 1882.

Fourth Annual Report of the Board of Health of the Taxing District of Shelby County (City of Memphis) for the Year 1882. By G. B. Thornton, M. D., President. Memphis. 1883.

Microscopical Examination of Potable Waters in the State of Connecticut. By Wm. J. Lewis, M. D. Hartford, Conn. 1883. (Reprint.)

Bericht über 110 Ovariotomien (Nach einem in der Berliner Gesellschaft für Geburtshülfe und Gynäkologie gehaltenen Vortrag). Von A. Martin. Separat-Abdrück.

Annual Address Delivered before the American Academy of Medicine at Philadelphia, October 26, 1883. By Traill Green, A. M., M. D., President of the Academy.

The Percentage of College-Bred Men in the Medical Profession. A paper read before the American Academy of Medicine, October 27, 1882. By Chas. McIntyre, Jr., M. D., of Easton, Penn.

De l'Emploi de la Résorcine dans le Traitement du Chancre Simple chez la Femme. Par MM. les Docteurs A. Leblond et Fissiaux. (Reprint.)

Roosevelt Hospital, New York. Eleventh Annual Report, from January 1, 1882, to December 31, 1882. New York. 1883.

Fifth Annual Report of the Managers of the Adams Nervine Asylum. 1882.

Review of the Drug Trade of New York for the Year 1882. Prepared by D. C. Robbins, Esq., for the Twenty-Fifth Annual Report of the Chamber of Commerce of the State of New York. New York. 1883.

Proposed Ordinance and Rules and Regulations for Regulating the Plumbing, House Drainage, Registration, and Licensing of Plumbers in the City of Philadelphia, as Reported by the Committee of Twenty-One. Philadelphia: P. Blakiston, Son & Co. 1883.

Original Articles.

A REVIEW OF THE EVIDENCE IN THE MALLEY TRIAL.

BY FRANCIS A. HARRIS, M. D.

The interest of the medical profession as well as that of the general public has been excited to a greater degree in few cases of late years than it was in that of the alleged murder of Jennie Cramer by the cousins Walter and James Malley, and Blanche Douglass.

The facts of the case, sometimes embellished by imagination and interlarded with the hypotheses of amateur and professional detectives, were spread by the press before the public from one end of the country to the other. The local feeling, though divided, preponderated against the accused. The verdict of the jury "Not Guilty" was looked upon rather as legally and technically correct than as absolutely just.

Few were found to advocate the cause of the Malleys, and one who ventured to express a doubt as to their guilt exposed himself to the liability of harsh criticism.

At a time when men's minds were so warped with prejudice, and when a dispassionate consideration of the whole case was hardly possible, a review of the evidence would have proved a profitless undertaking, but now that many months have elapsed, and the excitement has died away and prejudice in a measure effaced by the attrition of other affairs, a discussion of the evidence may not be without value, and I believe not without interest.

In the preparation of this review I am met at the outset with an obstacle which must necessarily compel me to work at a certain disadvantage.

There was no stenographic report of the trial, consequently no absolutely reliable transcript of the evidence; yet, by availing myself of the reports printed in several of the principal newspapers and of notes taken on the spot by counsel, I hope to avoid serious mistakes.

It is impossible in this case to properly appreciate the drift and force of the medical testimony introduced, without a knowledge of some of the other evidence, in other words the history of the case is of great importance in determining the value of the post-mortem appearances.

The story in brief is this: —

Walter Malley, son of a prominent dry goods merchant in New Haven, was the *friend* of a young woman known as Blanche Douglass, a resident of New York. James Malley had formed the acquaintance of Jennie Cramer, a New Haven girl, young, pretty, and not altogether prudent. Blanche by invitation of Walter visited New Haven, and the four were known to have spent some evenings together in some kind of amusement, and Miss Cramer remained out as late as three and four o'clock in the morning.

On the evening of the 3d of August, 1881, the four went to the Malley house, the family being absent, and after some eating and drinking all spent the night there. Testimony varies as to the assignment of beds, the boys asserting that they slept together, while Blanche asserts that she passed the night with Walter, and that Jennie was with James.

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, February 14, 1883.

At all events in the morning the girls left the house, apparently in the best of spirits, waving their handkerchiefs and kissing their hands to the young men, who remained at the house. The girls then went to a restaurant where they had among other things two porter-house steaks with mushrooms.

This was at ten oclock in the morning. A little later they went to Jennie's home and there took place an interview with Mrs. Cramer in which she rebuked Jennie for remaining out all night and told her that she (Mrs. Cramer) must soon find her another home.

The girls soon left the house and separated. A little after twelve o'clock Jennie rode to Savin Rock on a horse car and at this place she was seen late in the afternoon. This was on Thursday, August 4th. On Saturday at five o'clock in the morning her body was found floating on the in-coming tide.

So much is not in dispute. It was testified to by the government witnesses, and was admitted or not controverted by the defense.

Public and professional opinion at first ascribed the death to drowning, but as the doings of the few days prior to the finding of the body leaked out, especially those of Wednesday night, suspicions were aroused.

An examination of the remains by two physicians resulted in an opinion that the girl had been feloniously assaulted only a few hours before death.

A post-mortem examination failed to show the presence of some of the appearances usually noticed in the drowned, and parts of the body were sent to a chemist who reported the presence of arsenic, and the medical opinion of the examiners in the case was that death was the result of arsenic poisoning, the further opinion being expressed that the drug was given in a very soluble form, probably Fowler's solution.

Witnesses were found to swear to the presence of James and Jennie at Savin Rock late on the night previous to the finding of the body.

An indictment was found charging all three of the party with the murder of Jennie Cramer by administering to her arsenic.

The defense naturally claimed that death was caused by drowning, or if caused by the drug, that their clients had no knowledge of the matter.

Of course the first question to be answered was, Has a crime been committed?

An answer to this question demanded first of all a determination of the cause of death.

Fortunately there were not a variety of hypotheses, neither was there allegation of "a cause to the jury unknown." There were but two theories, arsenic poisoning and drowning.

The State introduced not only testimony to show the presence of the drug in the body, and that it was the cause of death, but also testimony to prove that the death did not result from drowning, which from the place of finding the body was *a priori* the cause.

The testimony was peculiar in some respects, for witnesses were allowed to testify to both matters of fact and opinion, although there was nothing to indicate that their opinions were of value by reason of education or experience. Thus the clamdigger, Asa Curtis, and Marsden, manufacturer of electric machines, recorded opinions on drowning alongside the opinions of medical witnesses.

Asa Curtis found the body floating on its face, hips upward, a fact that went far to convince him that Jennie was not drowned. The water was as deep as his

knees. He turned the body over and brought it ashore and laid it on the beach. When he turned the body over the jaw fell down. The condition of the body is described as "limp," or chiefly flexible. The hands were open and not clinched. The mouth and eyes were closed. The face was a "little reddish." There was no froth about the nose and mouth, "no water ran from the mouth," but a "bloody fluid" did run from both nose and mouth. The lips presented a fish-eaten appearance. There was no cutis anserina. (It may as well be remarked here that the body was not stripped at the beach, and whether cutis anserina was present on the anterior part of thighs, where it is usually found, could hardly be determined by an inspection of the hands and face.) The hands presented a water-soaked appearance, — so much for the external appearances, — and from these the non-medical opinion was formed, that death did not result from drowning, though whether this opinion was expressed till after further developments I have been unable to learn.

The autopsy was made by Dr. E. M. Prudden. How far it was really careful and accurate I cannot say, but in the reports at my disposal there is a serious deficiency of statement in regard to matters which would have been of much service in determining the cause of death.

The results of the autopsy are substantially as follows: —

Some stiffness (locality not stated). *The face of a dusky red color.* Decomposition had set in. No water in the lungs, none in the stomach. There was an overloading of the vessels of the membranes of the brain. All other organs normal and healthy, excepting one of the ovaries which presented a cyst. The stomach contained some fluid matter in which were fragments of fat and lean meat, *mushrooms*, and whortleberries. In the gullet were grains of sand. In the trachea as many as a hundred grains of sand, and also frothy mucus. In each pleural cavity a quantity described as "less than half a pint" of reddish fluid. No signs of any inflammation anywhere. No indications of any vomiting nor any purging. The lungs were well inflated but not congested, and the heart contained little blood, chiefly in left side. There were *no marks of violence externally.* The contents of the stomach, the lips, and the genital organs, were examined microscopically, but there is no report of any microscopic examination of the liver and kidneys, a pretty serious matter in a case of alleged arsenic poisoning. It must be admitted that from the above record are wanting many of the signs of death by drowning, or rather of death by asphyxia. The witnesses seem quite to have lost sight of the fact that asphyxia is by no means the only cause of death in drowning cases.

Medico-legal writers are substantially agreed that in death by submersion the cause may be either asphyxia, coma, or their combination comato-asphyxia, or by neuro-paralysis (syncope). In the appearances found in the Cramer case there is nothing to contradict the theory of coma, or coma with a certain amount of asphyxia. The question is, was the cause of this coma or comato-asphyxia submersion or some other remote cause.

The position in which the body was found floating was urged against the theory of drowning. Common sense ought to show that a body floating in tide-water, especially if rolled up on a very gently sloping beach by an in-coming tide, can furnish by its position no evidence as to the cause of death.

Two winters ago a man was seen to drown at Craigie's bridge in Boston, and when his body was found some time later it was floating face downward and hips out of water, exactly like the body of Jennie Cramer. The condition of the hands, eyes, and mouth, in the matter of their being open or closed, counts for nothing, as their appearance has varied in different cases.

It is true that cutis anserina is generally present in cases of death by drowning, but by no means invariably.[1] When present it may be confined to the front of the thighs or the flanks, and it may quickly pass away, especially with the advance of putrefaction.

That cutis anserina should not be manifest three days after death, or, as in this case is more probable, four days after death, when putrefaction had proceeded as it would naturally in the month of August, is not remarkable, and the report that none was found on autopsy should not militate against a theory of drowning. As to the examination at the time of the finding of the body, there is no evidence to show that goose-flesh was looked for where it is usually found, and we certainly have no evidence that it really was not present.

Froth at nose and mouth is often observed in drowning cases, but its discovery depends upon the amount of struggle that has taken place during the drowning and the early recovery and inspection of the cadaver. Its absence in this case proves nothing. Indeed if death had occurred, as is probable in this case, two days before the finding of the body which had been lying in shallow water in the first week in August, and if death had occurred from coma, with little if any struggle, the presence of froth would be more remarkable than its absence.

There was, however, a flow of bloody fluid from nose and mouth. This is an almost constant appearance in drowned bodies that come to the surface after a short submersion in the water in the summer, the fluid consisting partly of inspired water, and partly of the contents of the vessels overloaded by congestion, and this transudation has its further effect in masking, to a certain extent, the amount of congestion present ante-mortem.

The water-soaked hands and feet speak only for the length of time the body has remained in the water, and the appearance can be as readily produced in the bodies of those dying from any other cause as in the drowned.

It is a condition, however, more likely to be produced in thirty-six hours than in four or five. Some indication as to the length of time that had elapsed between death and the discovery of the body is afforded by the rigidity. "The jaw fell open," "the body was chiefly flexible," "some stiffness was present." Rigidity begins at the jaw, and it begins to pass away at the same place. Therefore, rigidity in this case had in all probability come on and to a great extent passed away. In a girl previously healthy a period of from twenty-four to thirty-six hours is not too long to allow for this occurrence where death was the result of violence. Certainly five hours is too short a time, and this must have been about the limit on the theory of the prosecution. Water is said to have been absent from the lungs. In this connection must be borne in mind the handling of the body, the position in which it was floating, the fact that a bloody fluid ran from nose and mouth, and also the fact that about half a pint of bloody fluid was found in each (healthy) chest cavity. It is true that

[1] Vide Casper Case, 293, et seq.

fluid is frequently found in the cavities of the body as the result of decomposition, but it is also recognized [1] that absence of water from the lungs in the bodies of the drowned is due to the transudation of the water in the air cells into the pleural cavities. Moreover, if the fluid in this case is to be attributed to decomposition, why is its presence reported in the pleural cavities alone? It should also have been found in the abdomen. If it be replied that decomposition had made greater progress in the lungs and upper part of the body the case for drowning is still further strengthened, for the progress of decomposition in cases other than those of drowning is the reverse of this.

There were particles of sand in the trachea. In a case of drowning this would be a thing natural and to be expected as a result of its inspiration during the death struggle. The State claimed that it washed in after death. If so, where is the water that washed it in? The report says no water; but dry sand did not tumble into the windpipe through a *closed* mouth.

The same remarks apply with greater force to the gullet. Here also the State claimed that the presence of a hundred grains of sand was not due to the natural process of swallowing, but to its being washed in. This in shallow water, with a closed mouth, and with only a few hours' submersion. It is one of the rarest things possible for sand to be washed into the œsophagus, the walls of which lie closely applied to each other, and it requires for the production of such result long immersion, great columnar pressure, at least an open mouth. Again, where is the water that came in with the sand? If sand was washed into the œsophagus there must have been free access to the stomach of a considerable quantity of water, yet the report says "no water in the stomach." Exactly how it could be determined that in the liquid contents of the stomach there was *no* water is not quite easy to understand. The probabilities certainly seem to be that the sand in both places came there in consequence of vital action, and, moreover, that there really was water to some amount in both stomach and lungs. The face, when removed from the water, was only "reddish," but on the following Monday it had changed to a dusky red; that is, decomposition had progressed in the *upper* parts of the body, a point to which allusion has already been made.

The place where the body was found was about midway between the end of Kelsey's pier and the shore on a diagonal line, and was found after a wind and tide which set in from the pier to shore in the same direction. This Kelsey's pier extends 1800 feet out into the water unprotected for long distances where the landings for steamboats are. The pier is very high, the bottom of the sea a hard sand rolled into almost a solid floor by the action of the tide.

A person who fell from this pier when the tide was low and striking on the head would be so stunned as probably to make little struggle and not rise to the surface at the time.

To recapitulate — the evidence in favor of death by drowning is: —

(1.) The place where the body was found — a priori.

(2.) The congestion of head and face.

(3.) The flow of bloody fluid from nose and mouth.

(4.) The progress of decomposition from above downward.

(5.) Presence of sand in the trachea.

[1] Ogston, page 511.

(6.) Presence of sand in the œsophagus.

(7.) The quantity of fluid in the pleural cavities, none being present in abdomen, and following from the above, a fair presumption of the presence of water in both lungs and stomach at time of finding the body, even allowing that the mucous froth found in the trachea at autopsy was simply a decay product.

(8.) A congestion of the cerebral vessels and a general internal condition not inconsistent with death from comato-asphyxia.

On the other hand we have

(1.) Absence of signs of death from asphyxia pure and simple.

(2.) A not clearly proven absence of cutis anserina at time of the finding of the body.

(3.) A possible absence of water internally at time of autopsy.

Taking the picture as a whole, and bearing in mind that it is rare to get all the appearances of death by drowning in any one case, I think it may be fairly claimed that in the absence of any other cause for death Jennie Cramer died from the effects of submersion.

The State, however, claimed to have found another cause.

The purely chemical part of the case I pass by, as it is to be reviewed by a gentleman of far greater ability than myself. Certain features, however, come within the province of the physician, and of these I propose to speak.

The chemist, Dr. Chittenden, who made the examination in this case, claimed that there must have been a little over three grains of white oxide of arsenic in the body.

The method by which this result was obtained is worth consideration.

Dr. Prudden testified that he gave to Dr. Chittenden *about* two thirds of the liver, *about* two thirds of the lungs, *about* one third of the brain, etc. That he did not weigh the organs or parts but estimated the amounts by the eye. These "abouts" are a matter of considerable importance when multiplication in four decimals leads to the estimate of so small an amount in the whole body.

Not criticising the fact that Marsh's test was used, now I believe regarded as quite unreliable for quantitative analysis, let us look at the results reported.

In Stomach and œsophagus	.158
Liver	.109
Intestines	.314
Kidney	.029
Heart	.028
Lung and spleen	.1146
Brain	.0255
Trachea and tongue and larynx	.08
Diaphragm	.01
	.8691

This was from the "abouts," but considering them as exact fractions, the chemist estimates that in the whole of these organs there must have been 1.1694 grain.

He examined various muscles and one bone, and finds in the bone none. In the various muscles examined he finds .852 of a grain, and estimates that if 22 pounds, 46½ ounces, including the bone, which was free from arsenic, contained the above amount, the whole body, 57 pounds, must contain 1.9498 grains, and this with that found in the organs makes a total of 3.1192 grains. But of this amount .472 grain was found in stomach and œsophagus. If this was there

unabsorbed it is clear that it must not be counted in its effect on life, for it is only the absorbed arsenic that does the killing. If this amount be subtracted there is left, even by this method of estimating, only 2.64 grains for the whole body, an amount but little larger than the smallest fatal dose on record.

It has been the habit of writers and experts to put the fatal dose of arsenic at two grains, but when we review the recorded cases we find only two cases of adults fatally poisoned by so small an amount, and one patient survived thirty-six hours, and the other five days, so the element of time becomes of importance in this case of Jennie Cramer. At all events she had about the smallest dose, even by estimate, ever known to be fatal.

How do the appearances at the autopsy support the arsenic theory? If there seemed a lack of complete evidence as to death by drowning, what shall be said of evidence of an irritant poison?

Every internal organ normal and healthy; not a trace of inflammation of the stomach, intestines, or rectum.

There could have been no vomiting or purging; as there was no water in the stomach, of course no excessive thirst. Whether there was a microscopical examination of the liver, kidneys, and heart I am not informed by the testimony. Certainly there is no mention of a condition which I believe to be inseparable from fatal arsenic poisoning, namely, fatty degeneration of the liver and kidneys. In short, there is not a single sign of the action of arsenic in this girl's body. So we have not only about the smallest fatal dose known, but also one that did its work without leaving a sign.

The government claimed that Jennie Cramer died of collapse without time for inflammation, and that, too, as the result of so small a dose. There certainly is nothing in the literature of arsenic poisoning like this, that I have seen. Moreover, the arsenic must have been taken under conditions unfavorable for rapid absorption, that is, with a full stomach.

Let us consider the matter of time.

It will be remembered that at ten o'clock in the morning she ate a porter-house steak and mushrooms. At the autopsy mushrooms and meat were found in the stomach. The State had in its employ detectives from the most celebrated corps in the United States. They could not obtain the slightest evidence that Jennie ever had another meal of mushrooms after Thursday morning. Had she done so it could have been easily ascertained, for the eating-houses were very thoroughly investigated. Admitting that mushrooms are somewhat difficult to digest, is it reasonable to suppose they would have remained in the stomach from Thursday morning till Friday night, a period of thirty-six hours? Would they not have been, by this time, digested, or have passed undigested, in one direction or the other, from the stomach, especially with the assistance of an irritant poison? Yet there they were. Government witnesses swore to Jennie's taking a hearty supper of chops, milk, etc., on Thursday night. Is it credible that an evening meal should be digested and assimilated, leaving the morning meal in the same stomach undisturbed? The witnesses were mistaken as to Thursday night. Indeed, the medical facts point to the girl's having died on Thursday night. For Thursday night speak the mushrooms, the water-soaked hands, the floating of the body on Saturday. The body, being heavier than the water, would sink until the gases of decomposition caused it to float. In the summer, and in shallow water, twenty-four hours is enough to produce this result. For Thursday night speaks the rigidity of the body when found; that is, the limitations of the rigidity. If death occurred from drowning on Thursday night the absence of certain signs, the froth, for instance, is the easier to understand. To be sure certain witnesses swore to seeing Jennie alive on Friday, but this evidence was flatly contradicted, and a very good case of mistaken identity was established. None of the witnesses who swore to her presence at Savin Rock on Friday night had ever seen her, and only identified her from a photograph, a most uncertain and dangerous procedure. But for the government theory it was absolutely necessary that Jennie should have been alive on Friday night. Assume the testimony of the State witnesses to be correct, what must have been the case from a medical point of view?

James Malley and Jennie are at Savin Rock at 10.40 P. M. Friday, Walter and Blanche having left. At that hour Jennie, aside from saying she was "paralyzed," was apparently well and happy. The government claimed that she died of sudden collapse, so after that hour James must have administered the dose, graduating it so that it should be at the limit of the smallest fatal dose on record, a most unlikely thing for a murderer.

It is hardly fair to suppose that she fell dead at his feet on swallowing the draught. The shortest time on record, and from a very large dose, if I am not mistaken, is from two to three hours, and from the small dose at least five hours. So life could not have been extinct before two to three A. M. At this hour it was dead low tide, and we have to suppose that James carried the body out on to the beach alone and unaided, and that there, at night, on the sea-shore, with the body part of the time in water, rigor mortis came on, and largely passed away, putrefaction set in, sand washed into the air and food passages, the hands became water-soaked, and the face congested, all in two hours, and this after death from collapse from the smallest dose, and in the shortest time on record. It is manifestly absurd. Moreover, there is no reliable and uncontroverted testimony that Jennie was ever seen alive after Thursday night.

Some stress was laid on the localization of the arsenic as bearing upon the form administered, that is, that it was given in a soluble form, and the experiments of Scolossuboff were quoted to sustain the theory; but these experiments were shown by Ludwig to be insufficient and their results misleading, and he proved that, as had been supposed, the liver and not the brain was the great store-house of arsenic in whatever form it be taken.

One other portion of the medical testimony is worthy of comment. A motive for the murder was necessary. The story of Wednesday night's doings was known, and a theory of rape was formed.

The body was examined by two physicians, one of whom had been many years in practice, and the other had not practiced for twelve years. This examination was made in a cellar lighted only by a basement window. By examination with their eyes in such light and by "manipulation" (presumably digital examination) they were enabled to form and swear to an opinion that Jennie had been ravished within sixty hours of her death. (This would carry it back to Wednesday

night.) It will be remembered that no external marks of violence were found.

That the hymen of this unfortunate girl who was in the habit of staying out till two and three in the morning with James Malley, or who may have met any sort of an accident not necessarily implying a loss of virtue, even if she did pass a night at his house, may not have been entirely perfect is quite probable, but in view of the fact that the girl without any other sign of violence left the house of her alleged assailant the very morning after the alleged accomplishment of his hellish designs waving and kissing her hand to him and was able directly afterward to eat a hearty meal of steak and mushrooms, there seems to be a sort of moral presumption that she was not very much maltreated. Surely an opinion that the hymen had been forcibly ruptured during a felonious assault within sixty hours of her death must come from those who have greater experience with recently ruptured hymens than falls to the lot of the average practitioner.

There is little to throw light on the remote cause of death. Whether it was a suicidal leap taken in the dark of Thursday night after a day's reflection on her mother's rebuke and her outlook for the future, or whether wandering out upon the pier in the evening a misstep plunged her down where, stunned, a brief and trifling struggle ended her existence, is something which may never be known till after the bugle call of the angel of the Apocalypse, but this case seems to me to illustrate the danger and folly of looking too strongly at individual points, giving undue weight to the presence or absence of by no means constant appearances, instead of viewing the picture as a whole and arriving at a conclusion based upon the more reasonable probabilities.

The lives of two young men and of a young woman of more or less value to the community, certainly with possibilities of good in them, were jeopardized, State and individuals put to very great expense, and the public mind inflamed all because there was not sufficient care taken in deciding the primary question whether a crime had really been committed or not.

ON THE EXISTENCE OF SYPHILIS IN AMERICA BEFORE THE DISCOVERY BY COLUMBUS.[1]

BY WILLIAM F. WHITNEY, M. D.

MUCH has been written to show that syphilis existed upon this continent previous to the coming of the Europeans. The early historians affirm that the aborigines suffered greatly from this malady, while the Indian traditions speak of it as the "white man's disease." This conflict of historical evidence can only be decided by the record which has been left upon the bones of the people themselves. But when employing this record there are two fundamental questions which must be answered in every case. First, are the bones those of Indians who died before the white man first visited these shores? and secondly, if there are lesions present, are they such as could only be caused by syphilis and nothing else?

The first belongs rather to the province of the archæologist, but his evidence must be such as can be readily accepted, and the authenticity of the specimen proved beyond doubt. It is for the pathologist then to determine the nature of the lesion. But a certain amount of special training must also be had in the appearances produced by the action of the soil and the roots of plants, which simulate quite closely the changes resulting from some of the pathological processes, especially those of a destructive character. And these latter, when present, are moreover very quickly effaced by the action above mentioned. Such being the case, any proof which rests upon ulcerative effects of syphilis must be received with the greatest caution, and as far as is known none has been presented as yet.

A new production of bony tissue could never have been produced after death, and it is to such lesions that attention has been chiefly directed. But every deposit of bone is not the result of syphilis, and especially is this true of the more or less nodular enlargements of the tibia, which have been brought forward as positive proof. This bone, from its position and subcutaneous situation, is more exposed to insult than any other in the body. And this must have notably been the case among the savage tribes inhabiting the forests and mountains, and the accidental blows which were received from logs or rocks are a sufficient cause to excite an ossifying periostitis or ostitis.

The Peabody Museum of Archæology at Cambridge contains many striking illustrations of enlargements along the face or crest of the tibia of Indians of unquestioned antiquity. But taken by themselves they do not require any specific exciting cause beyond an ordinary injury. And those which are in the Army Medical Museum at Washington are capable of being explained in the same way.

In order to prove that these lesions are due to syphilis a skeleton must be found that presents such processes not upon a single bone, but upon the bones of the upper as well as the lower part of the body. Such examples are always to be seen in all large modern anatomical collections. There is a very fine example in the Museum at Washington in the skeleton of a woman (No. 6414) who had been a camp follower, the bones of which, near the articular ends, are affected in an unmistakable manner. Should such a skeleton as this be found in a mound of undoubted antiquity, there would be no question of the existence of the disease in ancient times.

But whole skeletons are found very infrequently in the old burial places, the long bones decaying, as a rule, much earlier than the skull. It is remarkable, therefore, that more attention has not been paid to searching for marks of syphilis on the cranial bones, since there is one form which is quite characteristic. This has received the name of caries sicca, and was first fully described by Virchow.[2] As is indicated by the name, it is a form of destruction of the bone without suppuration, and what is of greater value in the present case is the fact that such centres are usually accompanied by an induration about them. The cicatrices resulting from this are often very superficial, have a tendency to assume an irregular shape, and are surrounded by a slightly thickened zone of dense bone. The edges are very sloping, and the whole surface looks as if a thin glaze of bone had been spread over it. When the process is extensive, the diploë is replaced by compact bony tissue. A thin layer of new bone may be present upon the surface of the internal table. A marked example of this manifestation is

[1] A portion of a paper read before the Boston Society for Medical Improvement, March 26, 1883.

[2] Virchow's Archiv, vol. xv., p. 243.

seen in a calvaria in the Warren Anatomical Museum of the Harvard Medical School (No. 4962).

In the collections of Indian remains in the Peabody Museum, the Army Medical Museum, in the Museum of the Royal College of Surgeons, in London, and of the Société d'Anthropologie in Paris, there have been found but two skulls which presented appearances in any way similar to this.

One was in the Army Museum, No. 733 of the anatomical collection, and was found in a mound in Kentucky by Mr. S. S. Lyon. There are cicatrices over the greater part of the parietal, frontal, and occipital bones. These are relatively large and deep, with comparatively abrupt edges, while there seems to be little tendency to sclerosis about the depressed portions. It seems to be more easily explained by syphilis than in any other way, but at the same time it does not present the undoubted characteristics which are required.

The other is in the Peabody Museum, No. 18264, and shows similar appearances, although not so extensive, and confined chiefly to the frontal region and parietal protuberances. Two or three deeply eroded spots are similar to those which have been observed in a case of cancer, but may have been simply the results of post mortem decay.

The evidence presented thus far does not as yet clearly prove the existence of syphilis in this country previous to the landing of the Spaniards. The conclusive proof is still to be furnished by an extensively and symmetrically diseased skeleton, or by a skull presenting a typical case of caries sicca.

EXPLANATORY REMARKS UPON NEURO-DYNAMIC MEDICINE, WITH CASES.[1]

BY B. O. KINNEAR, M. D.

In speaking this evening upon Neuro-Dynamic Medicine, I propose to open my paper by three quotations from Dr. Brown-Séquard's and one from Dr. John Chapman's writings.

Firstly. Dr. Brown-Séquard states: "I consider that the knowledge of the effects of the paralysis and the irritation of the sympathetic nerve opens a new and most important field in physiology, in pathology, and in therapeutics."[2] Again, from his Researches in Epilepsy, referring to the paleness of the face in that disease, he says: "We consider it a most interesting symptom, as it leads to a very probable explanation of the loss of consciousness in epilepsy. After Prof. Claude Bernard had discovered that the section of the 'cervical sympathetic nerve' is followed by a dilatation of the blood vessels of the face, I found that when this nerve is irritated by galvanism there is a contraction of these blood-vessels, and I explained the facts discovered by the eminent French physiologist and myself, by considering the sympathetic as the motor nerve of the blood-vessels of the face. When the excitation takes place in the spinal cord, and the basis of the encephalon which gives rise to the fit, the nerve fibres which go to the head are irritated and produce a contraction of its blood-vessels.

"Of course this contraction expels the blood and the face becomes pale. . . . We think that at nearly the same time when the origin of the branches of the sympathetic nerve going to the blood-vessels of the face receive an irritation in the beginning of a fit of epilepsy the origin of the branches of the same and other nerves going to the blood-vessels of the brain proper also receive an irritation. A contraction then occurs in these blood-vessels, and particularly in the small arteries. This contraction expelling the blood, the brain loses at once its functions just as it does in complete syncope."

The quotation from Dr. Chapman's writings runs as follows, namely: —

"It has long been known that the sympathetic nerve, called by Bichat the nervous system of organic life, presides over those processes by which the body is developed and sustained. It stimulates and controls the action of the heart, alimentary canal, genito-urinary organs, and all those processes of growth, repair, and removal of effete materials on which the continuous vitality and health of the animal organism depend. During recent years important additions to our knowledge of the functions of the sympathetic nerve have been made chiefly by Prof. Claude Bernard, Dr. Brown-Séquard, and Dr. Augustus Waller, with reference to its power of controlling the action of blood-vessels or what have been termed its vaso-moto functions.

"But as the sympathetic and cerebro-spinal nervous systems are intimately related, and indeed in some parts inextricably and indistinguishably blended both in structure and function, the nervous influence, whether healthy or not, which is exerted over the several organs of the body is twofold; hence, when that influence becomes abnormal, either in kind or degree, the most potent method of restoring it to its healthy condition would be by a dual action at once on the sympathetic and cerebro-spinal nervous systems. The physician who acquires the power of directly controlling these great controllers of the organic functions would immediately obtain the mastery over a large number of diseases." Dr. Chapman claims, and I believe truly, to have discovered this controlling power by the application of heat or cold over the vaso-motor and spinal nervous centres. The above experiments prove what I think is now the widely accepted belief: that the sympathetic ganglia control arteriole expansion and contraction, which, more clearly rendered, is to state that when irritated or hyperactively working these ganglia contract the blood-vessels under their control abnormally, when they act less forcibly than the normal standard requires the vessels acted upon dilate abnormally, either in active or passive congestion.

Dr. Chapman believes that the contraction of arterioles is caused by hyperæmia and expansion, by anæmia of these ganglia; that undue nerve force is created by *increased circulation* in the arterioles of central nervous ganglia, and lessened nerve force by a lack of *normal circulation* in the same. He gives a confirmation of the effect of cutting the cervical sympathetic nerve in Case XLIII., page 411, Work on Neuralgia, thus stating that the ice, when first applied over the cilio-spinal, or cervico-dorsal, region, gave rise to a "throbbing headache" and "flushed face." I can further corroborate this result in my own case, having used the ice upon the same region to subdue a constant though not severe posterior nasal catarrh, with which I had been troubled for several years. I always used it one hour to one hour and a half after breakfast. Toward the end of this time I invariably experienced a

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, February 14, 1883.
[2] Lectures on the Physiology and Pathology of the Central Nervous System, page 140.

sensation of brain exhilaration, like that produced by champagne, minus any intoxicating effect; while my face showed a full color, similar to that produced by walking briskly in stimulating cool air. A case of very severe posterior nasal catarrh now under treatment experienced the same "brain exhilaration" after the application of the ice, but has no flushing of the face apparent, being a man naturally pale, and past the usual age of fresh complexion.

That *contraction* of arterioles is caused by hyperæmia of sympathetic or vaso-motor ganglia is believed to be true by Dr. Chapman, for the following reasons: —

"To make this clear I must refer to the state of the brain when asleep. The brain during sleep receives less blood than during the waking hours." Upon page 171, Work on Neuralgia, Dr. Chapman makes the above statement, and then relates a case by Blumenbach of a patient whose skull had been trepanned, and whose brain was observed to sink whenever he slept, and to swell again with blood the moment he awoke. The above is reported in an Essay on Sleep and its Phenomena, by J. M. Pinkerton, M. D., London, 1839, page 8. The same fact was demonstrated by Dr. Durham in his vivisectional experiments.[1]

I will now read a few extracts from a very able article, upon Sleeplessness, its Causes and Treatment, published in the *Birmingham Medical Review*, for April, 1882, written by W. E. Green, M. D., of Sandown, Isle of Wight, England.

He says: "From the experiments of various observers it now seems placed beyond all doubt, that sleep is a condition of physiological cerebral anæmia." "Many physiologists have taught that a dilated condition of blood-vessels was the cause of sleep," and adds, "that this mistake may have arisen from the intense turgescence of blood-vessels after death from opium poisoning, forgetting that the state preceding death was coma, and not normal sleep." Further, "that Hammond, Durham, Donders, and Pflüger admit the brain anæmic during sleep, the latter observer endeavoring to explain the phenomenon by a chemical hypothesis. Fothergill also believes this, and states there are two factors causing the anæmia of the brain, while sleeping, namely, the modified blood supply, and the lessened activity of cerebral cells themselves."

Dr. Chapman says: "I have verified the truth of this discovery hundreds of times by decreasing the amount of blood in the brain." How? I will presently explain. He further states, what we all know, that "during sleep, respiration, oxygenation, and circulation are diminished; the amount of carbonic acid expired is consequently lessened, and the temperature of the body falls to an appreciable degree."

The conclusion drawn is this: "The diminution of the amount of blood in the brain and in the surface of the body, and the diminution of the functions of respiration, and therefore of oxygenation and circulation of the blood, are evidence of and, indeed, are produced by an increase in the nutrition and functional energy of the sympathetic or vaso-motor ganglia," thus meaning, although he does not say so, a hyperæmia of the same. The following sentence I place in the interrogative form, namely: The blood at night, leaving the brain and surface of the body, must go to internal organs, including nervous centres, which thus, during sleep, receive nutrition, and so a fresh supply of nervous energy for the following day's works?

[1] See the Guy's Hospital Reports, etc.

To answer how Dr. Chapman has reduced the quantity of blood in the human brain. By covering with hot water, at a temperature from 115° to 125° F., the sympathetic ganglia of the cervico-dorsal region. Why is this effect produced? According to neuro-dynamic medicine, heat thus applied stimulates to hyperaction the vaso-motor ganglia, by causing the blood to flow in greater quantity through these centres, thus producing a contraction of the capillary arterial system under their control. Dr. Chapman has demonstrated this in hundreds of cases. I have done so in many. To illustrate: —

Mr. B. A case of neuralgia of the left side of the face — supra and suborbital; quite extensive swelling of left cheek, with much heat; throbbing of temporal arteries upon both sides; face flushed and hot upon right side also. During the first eight hours after I saw him two grains of morphia were administered without the slightest relief to the pain, but rather a steady increase of it, for two hours, after the last dose of the drug had been taken. At the end of this period he asked me if I could not in some way relieve him soon, as the suffering was "unbearable." I filled a lumbar ice-bag of Dr. Chapman's half full of hot water and applied it over the cilio-spinal region. In fifteen minutes the pain was relieved, the throbbing ceased in the temporal arteries in thirty minutes, and the patient slept for four hours, waking with slight face and headache; but the swelling of the left cheek already much reduced.

A second application gave him rest for the night.

Before the heat was used the second time he was given a dose of calomel and bismuth, as he had been "living high," and the attack was doubtless produced by indigestion.

In a second case of neuralgia of the occipital and temporal regions of the head, with the same arterial throbbing conditions, the hot water, similarly applied, at once relieved the pain and produced sleep. In several cases of insomnia, with hot head, and without it, I have used hot water over the cervico-dorsal region with the one invariable result, the production of sleep.

If heat so applied does not cause the sympathetic ganglia to become hyperæmic, thus act more forcibly, and so contract the arterioles and the brain, how then can it act, applied over this region, and only so, to give rise to contraction of these blood-vessels? They certainly do contract in cases like those quoted.

If not caused by congestion of the centres controlling the arterioles, what is the reason for such action? Is there a further explanation or a more reasonable one?

To enter a little more deeply into this interesting inquiry, I refer to a case published by me in the Boston Medical and Surgical Journal for August 10, 1882. It was that of a child three weeks old, who for this period of existence had seldom ceased to cry, suffering constantly with flatulence and constipation. The infant slept little, and its feet were cool; that is, not naturally warm. During these weeks I used all available medical means in the way of laxatives and purgatives, with but very temporary benefit. I then used ice in a very small bag, over the baby's dorso-lumbar region, the nurse holding it in place until the ice melted. The baby stopped crying during the first application, appearing comforted. The feet soon became warm, and in ten days the bowels were acting freely and regularly.

Here the sympathetic centres were over-acting; thus the circulation of the blood through the contractile elastic or muscular coats of the intestine was feeble; also through the legs, as shown by the cool feet. The ice acted by causing a general dilatation of the arterioles controlled by the centres over which it was placed, the muscular or elastic coat of the bowel was nourished, and peristaltic action, which had been *nil*, ensued, the constipation being cured as the result. The baby is two years old, and the disease has never recurred. Now it was a very curious fact that when I first used the ice to this child the temperature of the back, over and near to the dorso-lumbar region, was very distinctly higher than that over the spine above or below this region. I remarked upon it at the time, to the nurse, not then realizing its importance.

Was this in an infant a proof of congestion of sympathetic centres? It seemed so to me, for, at birth, the three centres of ossification of the vertebræ are united, and the spinous and transverse processes are not really rudimentary; therefore between the surface of the back and the spinal cord and sympathetic ganglia there would be but a few lines distance, so that the heat produced by an active congestion of these centres might very well be felt directly above them. I state this fact as an interesting one, and put the conclusion to be drawn from it in the form of a question.

Being aware of dangers which may spring from a wrongful application of cold to the spine, by errors in diagnosis or carelessness in searching for contra-indications to its use, I have proven in a number of cases that ice applied over the proper regions will warm cold extremities as well as restore to full power paralyzed legs, which paralysis has been due to congestion of vaso-motor centres, with improper nutrition of muscles and the "motor nerve centres" controlling them, as a consequence, giving rise thereby to paralysis of the part. I refer to Case I. reported in the Boston Medical and Surgical Journal for August 10, 1882. This patient had a partial paralysis of the right leg, which was restored to normal action in three weeks, the result being permanent, the leg having been paralyzed for a year previous to treatment.

CASE II. is that of a hackman, who came to me October 12, 1881. He had been upon a tremendous spree, which lasted a week. Then he was seized with numbness in the right arm and leg, which frightened him so much that he at once stopped drinking. During the few days following the arm became better, but the leg grew very cold to both sensation and touch, with almost entire loss of muscular power. He was able to stand upon it, but the flexors of the thigh were quite useless, and he had to drag it after him. Both leg and thigh were so cold as to feel like that of a corpse, showing a strong contraction of arterioles throughout. I told him to return home and soak the diseased extremity in very hot water four or five times a day, for half an hour at a time. He returned next morning saying that the parts remained warm for a few minutes after each hot bathing, but soon became as cold as ever. I then applied the dorso-lumbar ice-bag for two hours, and told him to use the ice over the dorso-lumbar region eight hours each day. Two days afterward he walked into my office with a warm limb, and power already much restored to the previously paralyzed muscles. Ice was used as before for the next ten days, from six to eight hours per day, when the patient was able to renew his vocation, finding no difficulty now in mounting to his seat on the hack, or in exercise of the leg in any other way. Ice was continued twice a day until the middle of December. It has not again been applied, and the patient has remained well to this day, able to fulfill all his duties.

This is a remarkable instance of the sedative action of ice over hyperacting vaso-motor centres, restoring thereby anæmic circulation to its normal condition, and overcoming the motor and sensory paralysis caused thereby.

One other noticeable illustration of restored circulation by spinal ice application.

I. S., a mechanic, working in a piano factory in Cambridgeport, Mass., consulted me in March, 1882, suffering with chronically cold arms, legs, and body. There was constipation and feeble digestion, vertigo constantly increasing, and unfitting him for work. In the hottest summer nights he said that he had to cover himself with seven or eight blankets to keep warm and obtain sleep. Ice was applied from the fourth cervical to the last lumbar vertebra during four hours each day. He returned in a week, stating that he now slept quite comfortably under one blanket; his appetite was large, and his head entirely relieved from dizziness; the bowels were moving regularly. Improvement steadily advanced, and the man has had no further trouble. I saw him in November last, when he informed me that he was "quite well," with constantly warm hands, feet, and surface of body; no head trouble, and in every way healthier and stronger.

These cases illustrate, according to neuro-dynamic medicine, a hyperæmia of vaso-motor or sympathetic centres, as also in the case of the baby referred to.

Having become more and more convinced of the power of this system as a truly scientific medical remedy, I have at the same time realized the danger, through the very power of the treatment, of its application in cases which contra-indicate its use, so that in those patients upon whom it is used for severe, acute, or chronic troubles a very careful diagnosis should be made, as well as a searching inquiry into the history of the patient's former illnesses. To illustrate this caution, and demonstrate again the power of ice to produce vaso-motor paralysis, and heat vaso-motor contraction, I will close my paper by relating to you the history of another case.

The patient, a young man, had suffered severely for several years from spermatorrhœa. He was very anæmic and nervous. In six months' time the disease was much relieved, and the general physical condition greatly improved. He now caught a succession of severe colds, affecting the bronchial tubes. Each acute attack of the bronchitis was treated by heat between the scapulæ, with relief to the congestion of the bronchial arterioles (showing contraction thereof) in a very short time, and a free flow of mucus, which was easily expectorated. Since these attacks the patient has been unable to use ice above the lumbar region for the original trouble, because if placed over the last four or five dorsal he soon begins to breathe hard, and experiences a sense of suffocation and weight in the inferior lobes of both lungs. I have little doubt that asphyxia would be produced if the ice were used over his dorsal region for any length of time, from the vaso-motor paralysis induced.

REPORT ON PROGRESS IN MENTAL DISEASE.[1]

BY WILLIAM B. GOLDSMITH, M. D.

MECHANICAL RESTRAINT.

This question still continues a most important one in America, and we are certainly fast retrograding if there was good ground for the assertion which we often made five years ago, to the effect that the practice of American hospitals in regard to mechanical restraint was at that time about as nearly right as it could be, and was likely to become the universal practice of the world, for the amount of mechanical restraint now used in American hospitals is probably not more than a fraction of what it was at that time, and the zeal shown by most asylum officers in attempts to substitute something better for it certainly does not indicate complete satisfaction with the present practice. The tables of Dr. Wilbur's article, though obviously inaccurate and worthless for comparison of individual institutions, and those of Drs. Bannister and Moyer[2] certainly do not exaggerate the amount of restraint used in this country, and they fairly show that the occasions of its use are still a thousand times as frequent here as in Great Britain, and that this does not result, as has often been claimed, in fewer suicides, less "chemical restraint," or less seclusion, and they serve to indicate with equal distinctness to one familiar with the character of the hospitals there mentioned that the number of American institutions where mechanical restraint is not used with such frequency as to be proof positive of poor or insufficient attendance are still in a minority. This minority now seems debating whether a small amount of restraint is desirable, or whether it is demoralizing to hospital organization, even when at the minimum, and its use inseparable from its abuse, which is practically the position taken by alienists in Great Britain. If all American hospitals had reached this stage there would be little reason for criticism. When an intelligent physician experienced in insanity decides, after a careful investigation of the individual case, that it is wise to tie an insane patient, it is, in my opinion, all right, and probably the best treatment that that particular physician can employ, though another might improve it, as he might change the drugs in a prescription with advantage; but when this care is used, the fact is that something better is usually thought of, and if the occasion for restraint is determined by any one other than the intelligent physician the practice is all wrong. The article of Drs. Bannister and Moyer indicates that the determination of the occasion for restraint may be made by non-medical officers or by attendants in most of the hospitals examined by them. Their tables also show that much of the restraint is for the purpose of preventing "violence to self" or to others, and this is undoubtedly largely used to save the attendants trouble, or to economize in their number. If proper care of patients is accomplished I think that violence to self will not be considered an occasion for restraint, except in those rare cases where the patient dashes and throws himself about, apparently oblivious of any attempts at remonstrance or restraint. Dr. Shaw[3] says of such a patient: "These are very difficult cases to manage, as it is almost impossible to prevent them from bruising themselves, no matter what means you employ. The camisole would not prevent such a patient from striking her head against the wall; the crib would be as useless, for they could strike themselves against it. The padded room, with a watching attendant, appears to be the best method of caring for such a patient." I doubt whether the doctor has ever tried it.

Padded rooms have most excellent uses, and no hospital for the insane should be without them, but they do not satisfactorily answer the requirements in these cases. A padded room cannot have cushions fastened to its floor and be decent for any such patients to occupy long, and without them there is opportunity for any amount of bruising. I have several times seen such patients, treated without restraint, in the grasp of attendants, and in padded rooms, reach the collapse after the stage of intense maniacal excitement only to die from a crop of abscesses resulting from their bruises; and Prof. F. Jolly[4] has adduced arguments to show that many cases of collapse and death among the acutely excited insane are due to emboli of fat disengaged by the disorganization of tissues resulting from bruises.

In most of these cases I think the medical indications are best met by securing the patients to bed by properly applied restraint during much of their excitement. Properly applied restraint does not, however, mean bands so strong and tight that the physician can leave his patient to the occasional visits of the night watch, confident in the belief that he will be found in the same position in the morning, but easy enough to require, as a supplement, the near presence of an attendant, who can keep the patient clean, and loosen the bands, and allow changes of position in case of abatement of excitement or sleep.

These cases are probably not sufficiently frequent to furnish occasion for a fiftieth part of the restraint now used in this country, but it is well enough to remember them, with some others, lest in our new zeal we vie with our British brethren in ignorance of all uses of restraint, and apply it in occasional cases as awkwardly as they are apt to do.

The permission of mechanical restraint because of violence to others is always evidence of weakness of medical organization in a hospital, and will demoralize officers and attendants just in proportion to its frequency, and it is against this practice that Dr. Shaw, who is the only superintendent of a large American institution who can write on A Second Year's Experience with Non-Restraint in the Treatment of the Insane, though reports of last year show that a good many others have done about the same for a shorter time, chiefly directs his arguments. The arguments are good, and this article, with previous ones from the pen of the same author, in which he speaks more in detail of his methods, show that there has been an earnest and intelligent endeavor at Flatbush to replace restraint by closer and more carefully arranged individual attendance. The result there confirms general experience, that under this plan of treatment bad cases diminish markedly in number.

This writer shows a tendency, which is shared by others in this country outside asylums, to make the practice in regard to mechanical restraint too largely

[1] Concluded from page 347.

[2] On Restraint and Seclusion in American Institutions for the Insane. Drs. H. M. Bannister and H. N. Moyer. Journal Nervous and Mental Disease, July, 1882.

[3] A Second Year's Experience with Non-Restraint in the Treatment of the Insane. Dr. J. C. Shaw. Archives of Medicine, vol. vii., No. 2.

[4] On the Occurrence of Fat Emboli among the Acutely Excited. Prof. F. Jolly. Translated by Dr. T. W. MacDowall. Journal Mental Science, New Series, No. 82.

the criterion of excellence of hospital organization, and his logic is not the best when he ridicules the use of the term "chemical restraint," because "within proper limits, which govern the giving of sedative, and in fact of all medicines, it is justifiable, even proper and necessary, to give sedatives to an excited insane person as to give opium to a person in physical pain or suffering from peritonitis," a principle which is not likely to encounter dissent, but which does not apply to the cases in which sedatives are given to insane patients for much the same purpose that nurses give fractious babies soothing syrup. This practice is frequent enough, and not to be condemned in all cases, perhaps, but it fairly deserves to be called chemical restraint.

Dr. Woodside[1] writes in favor of absolute non-use of mechanical restraint, and tells of a horrible place which he saw, "where instead of the minority of the patients being in restraint, it appeared to me that the majority were," and says it was a State asylum somewhere, but for some unaccountable reason fails to designate where.

Dr. Wise,[2] in a very frank and judicious article, expresses himself strongly in favor of the British practice as compared with our own in this respect, though evidently thinking he could have improved the condition of a few cases that he saw, by restraint.

Dr. Brush [3] commends the freedom from dogmatism of British superintendents on this matter, and instances the fact that Dr. Major, of the West Riding Asylum, "does not hesitate to apply it when, in his judgment, it is for the patient's best interest," but it is hardly fair to instance Dr. Major as supporter of the use of mechanical restraint when the lunacy blue books show that he has applied it in but two cases for several years past, with an asylum population of about 1400. It is not in the general principles but in their application that the great differences of medical practice exist.

CURABILITY OF THE INSANE TREATED IN ASYLUMS.

Dr. Earle [4] continues his exceedingly valuable and, unfortunately, exact researches on this subject, and, among others, draws the two following conclusions: That "the (formerly) assumed curability of insanity has been practically disproved by more extensive experience," and that "the proportion of recoveries at the hospitals has been constantly diminishing during a period of from twenty to fifty years."

Dr. Park [5] gives, without comment, some very interesting information as to the subsequent history of 669 patients discharged recovered from the Worcester Lunatic Hospital. Of this number 153 remained well, and were living; 197 who were dead remained well during life; 30 committed suicide; and the remaining 289 cases relapsed.

Though a somewhat less discouraging view than Dr. Earle's may, I think, be fairly taken of these statistics, it is true, as he says, that our present ground for hopefulness in diminishing insanity rests in its prevention, and not in its cure.

[1] The Obstacles to the Abolition of Mechanical Restraint in our Insane Asylums. John S. Woodside, M. D. New York Medical Record, March 4, 1882.

[2] Asylums in Great Britain, Notes of a Visitor. P. M. Wise, M. D., Alienist and Neurologist. October, 1882.

[3] Notes on British Asylums. Edward N. Brush, M. D. American Journal of Insanity, January, 1883.

[4] Report of the State Lunatic Hospital at Northampton. Pliny Earle, M. D., Superintendent. 1881-82.

[5] Report of the Worcester Lunatic Hospital. John G. Park, M. D., Superintendent. 1881-82.

Reports of Societies.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

FEBRUARY 14, 1883. The meeting was called to order at eight o'clock. DR. G. B. SHATTUCK, chairman, being absent, DR. F. I. KNIGHT was chosen chairman *pro tem.*

The first communication was a very interesting paper by DR. F. A. HARRIS upon

THE MEDICAL EVIDENCE IN THE MALLEY TRIAL.[6]

DR. H. G. CLARK said that undigested food in the stomach was proof that arsenic in large amount could not have been taken within twenty-four hours before death. Arsenic is extensively used for cosmetic purposes by a certain class of our female population, and this fact may explain the presence in the system of the arsenic obtained from the body of Jennie Cramer by chemical analysis.

DR. B. O. KINNEAR asked the usual time of elimination of arsenic.

DR. HARRIS replied about twenty-four hours.

DR. H. I. BOWDITCH remarked that this admirable paper showed most conclusively, the extreme importance of careful and systematic examination of all the concomitant circumstances attending the occurrence of death under unusual or suspicious conditions, in order to answer the one great question which must precede all others, "Has a crime been committed in the particular case?" If it is possible to gain a definite solution to this inquiry in either direction, the further course of the individual case is plainly evident.

DR. B. O. KINNEAR read a paper entitled

EXPLANATORY REMARKS UPON NEURO-DYNAMIC MEDICINE, WITH CASES.[7]

DR. LYMAN said that he well remembered the advent of Dr. Chapman's theories into medical practice some twenty years ago, and at that time he supplied himself with ice-bags for its use. He did not know why the practice has fallen into such entire disuse, for there is no doubt that the proper application of heat and cold to the vicinity of the nervous centres may often be followed by marked results. He has employed the ice-bag upon the spine in cases of uterine hæmorrhage.

DR. CLARK added that Brown-Séquard had advocated this method of treatment in diseases of the back, liver, and other parts.

DR. DEBLOIS inquired the *rationale* of the action of ice for the cure of nasal catarrh, in reply to which DR. KINNEAR related his experience in the treatment and cure of this disease in his own person.

In reply to a question Dr. Kinnear stated that heat acts on vaso-motor nerves in a way similar to that of bromide of potassium, excepting that the latter also acts on the nerve cells. In determining the choice between ice and heat, the amount of irritation of the nervous centres should be taken into consideration. If there is only simple congestion heat should be em-

[6] See page 361 of this number of the JOURNAL.

[7] See page 366 of this number of the JOURNAL.

ployed. If there is much irritation then ice should be applied.

Dr. Knight asked how insomnia would be classified so as to decide between hyperæmia and anæmia, both of which produce insomnia. While a resident officer in the City Hospital the ice treatment was tried, but it was always a great question whether the condition of the nervous centres was that of anæmia or hyperæmia, and the treatment was finally abandoned on this account. One patient was afflicted with insomnia to such a degree that sleep was only obtained when lying upon an ice-bag. The action of cold was so intense as to induce severe freezing of the skin.

Dr. Kinnear said he had never observed freezing of the skin, but some patients cannot bear ice unless the skin is protected by flannel. For the treatment of insomnia, ice should preferably be applied to the lower lumbar region, thus dilating the vessels of the lower extremities, and so relieving the cerebral vessels. This treatment was also recently adopted in a case of acute mania (?) with immediate and complete relief to the maniacal symptoms.

Dr. Harlow asked an explanation of the fact that apoplexy may occur during sleep, if there is anæmia of the cerebral centres when the body is asleep.

Dr. Kinnear replied that vaso-motor paralysis will allow dilatation of the cerebral vessels, thus causing congestion of the great nervous centres, which has the effect of inducing a semi-comatose condition, which is not sleep, but is its very opposite. In this condition of congestion, apoplexy may readily occur, and it is a fact that it often takes place during supposed natural sleep.

Dr. G. H. Lyman read an interesting paper upon

EMBOLISM OF THE LEFT MIDDLE CEREBRAL ARTERY, ACCOMPANIED BY APHASIA AND AGRAPHIA.

The paper was accompanied by specimens of the patient's handwriting, obtained at various stages of his convalescence, and showed in one or two instances the so-called "*écriture en miroir*," or mirror writing, in which the patient wrote correctly, but in exactly reverse order in regard to the shape of the letters and their succession, precisely as is done in setting type for printing, commencing at the right edge of the sheet and writing toward the left.

Dr. C. E. Wing read a paper upon

A CASE OF INVERTED UTERUS TREATED BY THE MODERN METHOD.

Dr. H. G. Clark said that Dr. Wing's instrument reminded him of a similar appliance employed by his preceptor in a case of inverted uterus of ten months' standing, which was reduced by means of an old-fashioned stethoscope, the open end of which was covered by a tightly drawn diaphragm of chamois skin. The treatment lasted some weeks. In one other case which Dr. Clark has seen the inversion was reduced by taxis.

Dr. Lyman considered the present paper as one of great practical importance, and called attention to the previous contribution by Dr. Wing upon the same subject. Dr. Lyman asked how it was that such men as White, and Thomas, and Putnam have had such difficulty in reducing the inverted uterus. There must be some extraordinary difficulty in these cases when such men abandon the attempt at reduction, and amputate the organ instead. Read, and Putnam, and others kneaded the uterus by manual taxis without success. Thomas advises the reduction of one horn of the uterus first, gradually pushing and crowding the remainder of the womb after this portion until the reduction of the entire organ is effected. In the light of the experiences of such eminent men Dr. Wing's cases seem strangely easy.

Dr. Wing stated that those men, so far as he knew, had never employed this method or anything like it. The mode of treatment which has usually been advised and adopted is that of taxis, supplemented by the use of the elastic vaginal bag in the intervals between the attempts at reduction. The elastic vaginal bag was, as he had pointed out in his previous paper, a thoroughly inefficient means of applying continuous elastic pressure to the fundus of the inverted uterus. The distended bag presses upon the inverted organ perhaps to the extent of a square inch of area, while all its remaining surface and pressure are applied to the walls of the vagina. The effect upon the uterus is so slight that a curative result cannot reasonably be expected from the employment of this or any similar method of mechanical treatment. Again, in these recent cases, taxis, an important part of all former plans of treatment, is entirely done away with. White's method, a decided step in advance of the older plans of treatment, is nevertheless a very different procedure from the modern method. Taxis is employed during the process, and anæsthesia is necessary, both of which are now avoided. White's method is an operation more or less terrifying to the patient and her friends. It involves the overcoming of the uterine muscles by brute force applied but a comparatively short time. The modern method is painless, and tires out the muscle by continued gentle pressure.

In spite of Dr. White's assertion that he does not consider his method to be *forcible dilatation*, such a mode of treatment cannot properly be called anything else than forcible. White's method is radically different from that advocated in this paper, which is essentially Aveling's method. The fact that this gentle and painless mode of procedure was successful in a case of inversion of fourteen months' standing is evidence of its eminent adaptability to chronic cases.

Adjourned at 10.35 o'clock.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

March 26, 1883. Dr. Charles D. Homans presided.

Dr. William F. Whitney made a communication on

PATHOLOGICAL CHANGES IN THE BONES OF THE NORTH AMERICAN INDIANS,[1]

which he illustrated by showing numerous specimens, belonging to the Peabody Museum of American Archæology at Cambridge, which had been kindly placed at his disposal by Prof. F. W. Putnam, the curator.

Dr. Dwight said that he differs from Dr Whitney as to the union of the atlas and skull in some of these specimens being entirely pathological. In these cases there exists a long paramastoid process which is not

[1] Vide page 365 of this number of the Journal.

pathological but an anomaly. The union of the atlas to the paramastoid process may be pathological. He also spoke of large jugular foramina as occurring in Peruvian skulls.

DR. WHITNEY said that he had often seen a large jugular foramen on one side and a small one on the other. The larger the number of skulls examined, the more it appears to be an individual peculiarity rather than a race difference.

DR. GREENOUGH, speaking as to the evidence for and against the existence of syphilis among the prehistoric Indians, said that these tibiæ show that there has been a general inflammation, and they show nothing more than that. So far as we know, syphilis has always produced most terrible ravages among savage tribes; such as we never see in civilized countries. If syphilis existed we should expect to find diseased tibiæ, also the sternum would be especially affected. Here we have found periostitis, but it is an open question what caused it. He agrees with Dr. Whitney that there is no proof given by these bones of the existence of syphilis.

DR. WHITE said that even if we found undoubted evidence of syphilis among the Indians prior to the Spanish discoveries, it would not follow that the disease was first carried to Europe by Columbus. It may have come to both countries from Asia for instance. He agrees with Dr. Whitney that he has never seen evidence of syphilis in these prehistoric bones in the Cambridge Museum. He spoke of the liability of savages to blows on the tibia necessarily following their manner of life, and also of the changes caused by cancer and lupus as making the diagnosis difficult. He thinks there is a wonderful absence of evidence of disease in the Indian bones.

DR. WHITNEY said that this is to be explained as all evidences of ulcerative disease, excepting cicatrices, have to be excluded because they may be caused by the weather. He often sees cases that if recent would certainly mean ulcer, but being old it is impossible to say. The ulceration of cancer is sharp and circumscribed, but exposure to weather may obliterate these peculiarities. Ulcerated bones probably exist in larger numbers than we are able to prove.

DR. HODGES said he thought that bone lesions in syphilis were rare. Contrary impressions date back to a time of imperfect diagnosis when the ravages of epithelioma and lupus were mistaken for those of syphilis. There are in books by no means old, pictures of supposed syphilis, which a better knowledge now tells us are of non-specific diseases. It is not easy to obtain unmistakable evidence of syphilis in the bones. There are more non-syphilitic than syphilitic nodes. Pressure so habitually used as to distort the skull must often cause sloughing, periostitis, and a permanent condition of the bone, such as was shown in several of Dr. Whitney's specimens, and explains their appearances more reasonably than the supposition of syphilis. The specimen of Pott's disease seemed to him very remarkable. He had never seen one in which the antero-posterior curvature was so great. In view of this extreme distortion, the solid anchylosis, the well-marked vertebral bodies, the perfect spinal canal, and transverse processes, the insignificant loss of substance compared with what might be expected from the amount of deformity, and in view of the presence of pottery representing hunch-backs, which Dr. Whitney had described as being found in the graves of the neighborhood, showing that some special importance was attached to this condition, he would ask Dr. Whitney if it was not possible that this specimen owed its existence to some artificial and deliberate cause set in operation at an early age.

DR. SAMUEL CABOT asked if there were many symmetrically diseased bones.

DR. WHITNEY answered no. This may depend on the condition of the skeleton. One perfect skull may be found in the same grave with only the enamel of the teeth of another. Age does not affect this matter of preservation or destruction, therefore we must take into account the probability of one of two symmetrical lesions being destroyed.

DR. CHARLES H. WILLIAMS asked how we are to account for the small number of dislocations of the lower extremities.

DR. WHITNEY said that there is in the museum but one dislocated hip, perhaps as hard as any to be reduced by savages.

DR. CABOT thinks that with dislocations of the lower extremities the sufferers would be less likely to join their friends and might die of starvation; or they would be greater incumbrances and might be killed. In either case the bones would in time fall apart, and there would be no sign left of the injury.

DR. BRADFORD spoke of the great value of the Indian remains in the Peabody Museum, especially of the fractured femurs and diseased knees and ankles. There is a specimen of fractured femur in which there is not much rotation and not much bowing forward, showing, he thinks, that the mound builders had some idea of surgery.

Both this and diseases of the ankle and knee must have needed nursing. The case of Pott's disease must have been something of an incumbrance, all going to show that they were not in the habit of killing all the sick. Caries of the teeth has not been alluded to by Dr. Whitney. It exists in many of the skulls, especially caries of the wisdom teeth, proving that modern diet is not the sole cause of this disease. Some of the teeth are worn as if from coarse food.

DR. WHITNEY said that he had not spoken of the teeth because Dr. Rollins is preparing an article on that subject. There is an alveolar abscess in five skulls out of ten. Bad teeth were found especially in the California Indians, perhaps owing to the mixture of sand with their food.

DR. HODGES asked if among the North American Indians there were evidences of surgery or any marks of the saw and trephine such as had been found on the skulls of South American Indians.

DR. WHITNEY answered that therewere not. Fletcher's Résumé states that there is only one Peruvian skull that had been trephined as in France. There are one or two cases from Peru in the Peabody Museum where there are indications of removal of portions of the bone.

DR. HODGES observed that the skill with which they worked upon stone suggests that the operation of trephining would have occasioned them but little mechanical difficulty.

In answer to Dr. White, DR. WHITNEY stated that no Hutchinson's teeth have been found among the remains of these Indians. In many skulls no lesion whatever is found. In reply to Dr. Hodges, he said that he thinks syphilis can sometimes be recognized in the bones. Undoubted lesions are perhaps rare, but they

exist, and we shall sooner or later find them in the bones if the Indians had the disease.

DR. WHITE reminded the Society that the Indians were innocent of mercury and iodide of potassium, therefore if the disease had been once started it would have done much harm and left traces.

NEW YORK ACADEMY OF MEDICINE.

AT a stated meeting of the Academy held April 5th, DR. EDWARD L. KEYES, the associate of the late eminent surgeon, read a

MEMORIAL OF PROF. WILLIAM H. VAN BUREN;

after which DR. BEVERLEY ROBINSON read a paper entitled:—

A CLINICAL STUDY OF THE ACTION AND USES OF CAFFEINE AND CONVALLARIA MAJALIS AS CARDIAC TONICS.

He commenced by saying that until very lately digitalis was generally regarded as the essential, indeed, almost the only real stimulant or tonic of the heart. Then alluding briefly to the action on the heart of alcohol, ether, ammonia, iron, quinine, strychnine, and coca, he remarked that in belladonna we had the only drug which had hitherto seemed to him ever to take the place, even in a moderate degree, of digitalis in its direct tranquillizing, and at the same time strengthening, effect upon the heart; though belladonna appeared to influence, especially, the cardiac plexuses, and the intra-cardiac ganglia, and not to give immediate power to cardiac muscular fibre, as digitalis did. Having spoken of the general usefulness and reliability of digitalis as a heart tonic, he went on to say that occasionally we were disappointed in its action, and on this account we were glad to welcome any drug or drugs which should fill a lacuna already appreciated.

Within the past year three new drugs had claimed attention as cardiac tonics, namely: caffeine, convallaria majalis (or its glucoside, *convallamarin*), and nitroglycerine. Caffeine, or citrate of caffeine, as it was improperly called, was, however, no new remedy. For a long time its diuretic action had been familiarly known; but not until the labors of Gubler, Lewis Shapter, and Leech had the attention of the profession been specially directed to it as a cardiac tonic and regulator.

Thus, mentioning the articles which had since appeared by Brakenridge, Lépine, Huchard, and Milliken, he stated that all these writers recognized in caffeine a useful addition to our therapeutic arsenal. In moderate doses it at first slowed the action of the heart; but afterwards the cardiac pulsations were apt to become more rapid. Its influence over dropsy was very great in some cases, but in others it seemed to be quite inert. Whenever the dropsy was dependent simply upon cardiac failure, caffeine invariably increased the secretory function of the kidney, and in a corresponding degree the infiltration of tissues subsided. When, however, the anasarca was an expression of acute parenchymatous renal degeneration, caffeine had no diuretic action whatever. Brakenridge had become convinced that digitalis and caffeine were complementary of one another in their diuretic action, and, further, that when given at the same time, they exerted a far more powerful diuretic action than when given each drug by itself. Over digitalis caffeine had certain evident advantages: (1.) It had no tendency to cumulate in the economy, and hence to occasion poisonous effects. (2.) It acted with greater rapidity, and in certain cases of asystole, when life was imminently endangered, this property might be of great value. (3.) It rarely or never disagreed with the stomach, when it had diuretic effects, or in any way caused symptoms of a dyspeptic character. Its disadvantage, in certain instances, was to stimulate the brain too actively, and thus occasion persistent wakefulness and other nervous symptoms. To be effective it had to be given in relatively large doses from the beginning. Six grains a day was the smallest amount that would show any special elective action, and this amount might be rapidly increased to twenty, twenty-five, thirty, or, in exceptional instances, to thirty-five grains a day. It was to be given in divided doses, so that its action might be continuously kept up, as it was rapidly eliminated from the economy.

Dr. Robinson had given caffeine with good results in the following cases, which he reported in detail: (1.) A case of typhoid fever (fourth week) in which the heart-beats were extremely feeble, muffled and somewhat distant, while the pulse was dicrotic, depressible, and irregular, with marked adynamia and cerebral apathy. (2.) Cardiac hypertrophy with aortic stenosis. The caffeine relieved pain in the chest and increased the amount of urine in a marked degree. (3.) Aortic stenosis, with frequent attacks of vomiting. (4.) Asystole, treated at different times with caffeine, digitalis, and convallaria. No pronounced abnormal murmur generally.

The lily of the valley, convallaria majalis, had been known many years to scientific observers, especially in its quality of a purgative plant somewhat similar in its effects on the human economy to aloes or scammony. As far back as 1830 an analysis of its constituents had been made by Valz, and two glucosides had been separated from it and called by him *convallamarin* and *convallarin*. In 1865 Stanislas Martin had discovered the alkaloid *majaline*, and to this alkaloid, as well as to convallamarin, the special efficacy of the plant as a cardiac tonic was supposed to be due. This action, however, had been but little dwelt upon by medical writers, and it was only after many attempts that preparations had been made by pharmacists free of the purgative elements which were notably contained in the resinous part of the plant. In 1867 Marmé made a thorough study of the physiological action of convallamarin and convallarin on animals, and he affirmed that as a cardiac poison convallamarin approximated in quality and quantity digitaline and helleborine. For many years convallaria had been employed in Russia as a popular remedy for dropsy; but few or no detailed reports as to its uses in this direction had appeared in medical periodicals until the year 1880, when there were published in the *Vratch* some articles relative to the employment of this drug as a tonic of the circulation. A chemical analysis of convallaria made by M. Hardy, chemist of the Hotel Dieu, Paris, had confirmed the statements already made known by Marmé, that the glucoside convallamarin was extremely powerful in its action as a poison, in which it closely resembled digitaline. The second glucoside, convallarin, seemed to be more or less inert in its properties. Sée discovered that a local application of a few drops of an aqueous extract of convallaria to the heart of a frog

would stop its pulsations immediately. In a less degree this held true of the local application of this extract to the hearts of animals higher in the scale. Convallaria was found to have no perceptible effect upon the bulk of urine passed in twelve hours. It gave force to cardiac pulsations, rendering them slower, and established again a normal rhythm in cardiac action. The respirations were slower and deeper. The action on the vagi was to dull their sensibility to some extent. If poisonous doses were given, the pulse became irregular and intermittent, and finally the heart stopped in systole, contrary to the effect of muscarine. Dr. Robinson then quoted Ott's conclusions upon the physiological action of convallaria as published in the *Archives of Medicine*, for February, 1883. Among them were the following: That it increases the arterial tension greatly at the same time that the heart begins to beat more frequently, though the heart begins to fall before the tension; that the decrease of cardiac frequency is not due to cardio-inhibitory excitation, but to an action on the heart itself, probably its muscular structure; that the rise of arterial tension is mainly due to stimulation of other vaso-motor apparatus than the main monarchical vaso-motor centre; that, contrary to the action of digitalis, it primarily accelerates the heart; and that it is a drug which ought probably not to be pushed to any great extent, if one is to judge from its effect upon the hearts of the lower animals. In Professor Sée's clinical cases there were twenty individuals all affected with a marked degree of cardiac disorder, and in seventeen there was marked improvement. The most notable effects produced were those on the urine, the pulse, infiltration of tissue, and dyspnœa. Having next referred to the recent contributions of Drs. E. P. Hurd, Henry Ling Taylor, A. H. Smith, E. L. Trudeau, and W. M. Polk, in this country, and Schmiedeberg and Berthold Stiller, in Germany, in regard to the action and value of convallaria, he proceeded to state that he had employed the drug in four cases of asthma (in three at least of which there was evident chronic bronchitis with emphysema), in one case of enlargement of the heart without valvular lesion, double pleurisy with effusion and chronic Bright's disease, in one of chronic pericarditis, nutmeg liver, and chronic diffuse nephritis, in one of subacute pericarditis, atheromatous degeneration of the coronary arteries and cystic degeneration of the kidneys, in one of combined mitral stenosis and aortic regurgitant disease, in four of simple dilatation of the heart (in one of which there was an inter-current attack of subacute laryngitis, and in two marked cardiac irritability), in one of tendency to syncopal attacks, and in one of cardiac hypertrophy and aortic stenosis; making in all fourteen cases. Eight of these cases were then related in detail.

Among the effects produced by convallaria as observed by Dr. Robinson were the following: —

(1.) *Digestive organs.* On two occasions he had seen decided nausea and even vomiting follow closely upon the exhibition of the fluid extract, but he was not convinced that the drug was responsible for the stomachal intolerance, since in these instances it could with equal propriety be attributed to commencing uræmia, or, indeed, to simple chronic congestion of the gastric mucous membrane under the dependence of weakened heart power.

(2.) *Heart; pulse.* Whenever the cardiac beats had been very irregular, unequal, or intermittent, he had not seen these conditions much changed even by the exhibition of quite large doses (ten drops every three hours) continued for several days at a time. In two patients who suffered from painful palpitations, however, it was of the greatest benefit. The number of the cardiac beats had been lessened a few beats in several instances, but he had only once remarked a rapid and considerable diminution in the cardiac acceleration, and this was occasioned, not by giving the drug by the mouth, but by means of hypodermic injection. It seemed to him that the pulse beats showed decidedly increased vascular tension, although no sphygmographic tracings were taken to determine the point with great accuracy. He could affirm, however, that while giving convallaria he had never noted any symptoms showing sudden cardiac depression or failure in its contractile force, such as had been remarked in experiments with the drug upon animals. There did not appear, therefore, within reasonable limits of doses, to be any risk of producing poisonous effects by its employment. The cumulative effects were not to be feared in man like those of digitalis, and this was to be explained by its rapid elimination from the economy, and also, probably, by the fact that convallaria acted more particularly as a stimulant of the peripheral fibres of the vagi rather than as an agent which affected the cardiac muscular fibre directly.

(3.) *Respiration.* It had occasioned more freedom of the respiration, the patients manifesting less anxiety and oppression on account of difficult breathing than before its exhibition. This it had accomplished by rendering the inspirations slower and more profound.

(4.) *Diuretic effects.* Instead of finding in convallaria the valuable renal stimulant which he had been led to expect from the observations of others, he found that the urine was scarcely at all increased by its exhibition, and that no sensible change in the appearance, specific gravity, or composition of the urine was caused by it.

(5.) No symptom of poisoning nor any direct effect upon the central nervous system had been remarked by him. The preparation used was the fluid extract of the root, manufactured by Parke, Davis & Co., and the doses were usually five or ten drops every two, three, or four hours, in some agreeable menstruum.

After some general remarks on the subject of "asystole," Dr. Robinson quoted Sée's tabulated statement in regard to the elective action of drugs, which, he said, should be known as "cardio-vascular drugs and poisons," and went on to say that convallaria was probably to be classed with digitaline. It was possibly, therefore, a stimulator of the cardiac muscle in its first period of action, whilst its after-effects might become of a paralytic order. Further, it was, after the manner of digitaline, a stimulator of the medullary inhibitory centres. It was, no doubt, in this latter action that resided its special power of controlling dyspnœa and the symptoms of purely functional heart disorder, particularly paroxysmal palpitation and rapid and irregular heart action dependent upon debility. (Trudeau.) To this he would add that it was probable that convallaria was more potent in its action upon the pneumogastric trunks than it was in its direct influence over the cardiac muscular fibres. This appeared to him a fair deduction from what he had noticed with respect to its action in his cases. In regard to caffeine, he was of opinion that it was mainly through its elective action upon granular renal epithelium, which it stimulated in a remarkable degree when it was in a healthy

state, that it strengthened, indirectly, cardiac contractility. In addition it contributed to this result by a moderate stimulating action upon the different sources of nerve supply to the heart.

The conclusions which he derived from the cases reported were as follows:—

(1.) In caffeine and convallaria we have two efficient heart tonics.

(2.) The diuretic action of caffeine is more marked than that of convallaria.

(3.) Convallaria is well borne by the stomachs of most patients suffering from chronic cardiac disorders.

(4.) When not well borne, rejection of the medicine by the stomach is probably due to the uræmic condition already commencing.

(5.) As cardiac tonics it is difficult as yet to assign a decided superiority to either of these drugs, both of them giving increased cardiac power.

(6.) Cumulative effects do not occur from their continued use during a period of ten days or more.

(7.) Their power of restoring the rhythm to the cardiac pulsations and increasing the quantity of urine is not equal to that of the infusion of digitalis.

(8.) In this latter drug we have still the most efficient heart tonic and regulator that has been discovered.

(9.) Digitalis is a more powerful diuretic than caffeine.

In regard to nitro-glycerine, Dr. Robinson explained that the cases which had been under his observation, with two exceptions, had not hitherto seemed to require its use, and he had nothing, therefore, to present at that time concerning the action of this remedy.

Recent Literature.

The Dispensatory of the United States of America. By Dr. George B. Wood and Dr. Franklin Bache. Fifteenth edition, rearranged, thoroughly revised, and largely rewritten, with Illustrations. By H. C. Wood, M. D., J. P. Remington, Ph. G., and S. P. Sadtler, Ph. D., F. C. S. Philadelphia: J. B. Lippincott & Co. 1883. Pages x., 1928. 8vo.

The appearance of the long promised fifteenth edition of this the most widely known and commonly consulted work upon American pharmacy during now nearly half a century is of immediate interest to physicians and pharmacists alike.

Authority to use for comment the text of the Sixth Revision of the United States Pharmacopœia was granted it by the Committee of Revision and Publication.

The United States Dispensatory as a commentary upon the Pharmacopœia has followed the late changes in that work, and now has alphabetically arranged in part one the first and second parts of its former editions. The former part three now becoming part two, while part three now contains the former appendices, with various new miscellaneous matter such as the officinal tests, various tables, and analyses of all the American mineral springs of known medical value, with a number of well-known European waters.

The amount of new matter added may be judged from the fact that the index of this revision contains about five thousand, or fifty per cent., more titles than did the last, including however among these the German and French synonyms never before indexed. A novel feature of this edition is the giving upon a separate line the proper English pronunciation of the officinal titles, the words being divided into syllables, accented, and the pronunciation indicated by diacritical marks.

The descriptive Materia Medica has received the little revision necessary to be in accord with the more modern researches. The drug illustrations are with three minor exceptions original, and the very accurate representations of microscopic sections will be of service to students of structural characteristics. The medical properties and uses of drugs have been very largely rewritten, the special individual opinion of the senior editor being particularly noticeable in certain portions.

The chemical portions have received important changes. All reactions and chemical discussions are now based upon the modern notation. The pharmaceutical portion is almost entirely new, largely necessitated by the pharmacopœia adopting parts by weight alone in its working formulæ. This edition, however, gives them also in a form adapted to the use of those who prefer to measure the fluids, by giving them in terms of avoirdupois ounces and wine fluid ounces. They would, however, have approximated more closely to the simple relations of the officinal formulæ had fluid ounces of the imperial measure instead of the wine been used, for this and the ounce used, like the gramme and the cubic centimetre, both weigh the same.

The doses are given as in former editions but with the metric equivalents added in parentheses.

This edition does credit to the three years of careful revision which it has received at the hands of its three editors, and to its publishers for their good taste in the type, printing, paper, and binding in which they have issued it.

The work is such a very serviceable commentary upon the United States Pharmacopœia as to render it well nigh indispensable to every physician and pharmacist as a supplement to that work. B. F. D.

A System of Human Anatomy, including its Medical and Surgical Relations. By Harrison Allen, M. D., Professor of Physiology in the University of Pennsylvania. Section III. Muscles and Fasciæ. Philadelphia: Henry C. Lea's Son & Co. 1883.

The third part of Professor Allen's work has appeared with a commendable promptness which the reviewer regrets he has been prevented from imitating. We are inclined to think it will strengthen the favorable impression which the first two parts have produced. The general properties of muscles, their shapes, actions, and variations, are discussed in the opening chapter in a very satisfactory manner. We would call attention to some very judicious remarks in a foot-note showing the danger of error in accepting too readily the results of post mortem experiments to prove what muscles are ruptured in dislocations. The descriptions of the individual muscles are, as a whole, very satisfactory. We occasionally meet with facts that are new to us and again notice omissions. The account of the muscles of the lips and mouth is hardly as minute as it should be. We are not satisfied to be told that certain muscles are inserted into the lips, when in fact their fibres go far towards making up the complex group of fibres for which Professor Allen retains the name "orbicularis,"

though in fact they are largely, if not wholly, of extraneous origin. We are again disappointed that there is not a proper discussion of the action of the intercostals.

There is much to praise in the section on the muscles of the fore-arm and those moving the fingers. The fasciæ of the neck are clearly described, but it seems to us that the continuity of the deep process that runs to the first rib, with the costo-coracoid fascia, is not made sufficiently clear. We are not quite so well pleased with the treatment of the fasciæ of the pelvis and perinæum. We do not like the division of the pelvic fascia into the parietal and visceral layers. The former seems to us much better described as the undivided pelvic fascia. The observations concerning anomalies are often very valuable. Instead of enumerating at random the peculiar forms a muscle may present, the author endeavors, as a rule, to classify the variations so that they may be more readily understood. There is a chapter on Hernia, one on Displacements in Fractures, and various surgical observations are introduced at appropriate places. The plates are clear and good.

T. D.

The Diseases of the Liver with and without Jaundice, with Special Application of Physiological Chemistry to their Diagnosis and Treatment. By GEORGE HARLEY, M. D., F. R. S. Illustrated by Colored Plates and Wood Engravings. Philadelphia: Presley Blakiston, Son & Co. 1883.

Apart from any knowledge it conveys this is a readable book, stamped with its author's marked individuality. The only thing it lacks in this respect is Dr. Harley's peculiar system of spelling; but having resisted the temptation to employ the Harleian phonography lest the usefulness of his work should be curtailed, the author seems to have compensated himself by an indulgence in a great variety of other idiosyncrasies.

This octavo volume of 750 pages embodies the whole subject of a monograph on Jaundice and Diseases of the Liver, published by the author in 1863, but the present work is much greater than the former, we are told in the preface, both as regards its scope and materials. As regards its scope we must acknowledge that a vast variety of subjects are incidentally touched upon, the connection of some of which with the liver or its diseases is not easy to discover. A long digression upon champagne in general and the author's own wine cellar in particular we the more easily forgive, as he falls foul of the absurd English fashion of consuming extra dry and *brut* wines, a fashion ridiculously imitated in this country along with other temporary aberrations and extravagances of our British cousins, based, perhaps, originally on some local peculiarity, but which among us have absolutely no *raison d' être* whatsoever.

Upon taking up Dr. Harley's book the reader soon acquires the feeling that physiological chemistry, as mastered and expounded by the author, an early pupil of Ludwig, is about to rob the liver as an organ, and "biliousness" and "jaundice" as manifestations of that organ's displeasure, of all their mystery and much of their terror.

Such a feeling, if not utterly put to flight, is certainly startled and deprived of its self-confidence by the prolixity, the inaccuracies, and want of methodical arrangement noticeable as one progresses in the book. Again, the reader's sympathy is repelled by the tone generally adopted by the writer when speaking of professional colleagues.

We must, however, still acknowledge that notwithstanding its faults, and they are neither few nor small, Dr. Harley's book is readable. We are conscious that this is not the highest praise to accord a work on a scientific subject.

Proceedings of the Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons. Philadelphia: J. B. Lippincott & Co., 1883.

These Proceedings include a report of the sessions of 1881 and 1882, and contain several papers of considerable interest. The first paper is by Dr. G. G. Tarbell, of Boston, on the Height, Weight, and Relative Rate of Growth of Normal and Feeble-Minded Children. The conclusions that Dr. Tarbell arrives at are, (1.) That idiotic and feeble-minded children in our school, throughout their period of growth, are about two inches shorter and nine pounds lighter than normal children of the same ages. (2.) That the relative rate of growth of the two sexes of idiotic children corresponds very nearly to that of the two sexes of normal children, and is subject to the same variations at the age of puberty, and (3.) That the period of puberty is about two years later in idiots than in normal children. Dr. Tarbell states that these figures refer only to the comparatively small number of children at the Massachusetts School for Idiotic and Feeble-Minded Children, and hence they should not be accepted as conclusive.

Dr. H. B. Wilbur, of Syracuse, presented a paper on Some of the Abnormal Characteristics of Idiocy and the Methods Adopted in Obviating Them. Dr. Wilbur has arrived at the conclusion that institution treatment is better adapted to the education of idiots than individual education. The pupil seems to tire of instruction aimed at by him alone, and there is nothing in such a system to awaken the spirit of emulation or sympathy. In the institution the idiot is stimulated by the bracing atmosphere of associated will-force, and the feebler idiots are carried onward to a degree beyond our pre-conceived ideas.

Another interesting paper was that of Dr. Isaac H. Kerlim, of Elwin, Pa., upon The Epileptic Change and its Appearance among Feeble-Minded Children. The conclusions arrived at in this paper are: (1.) That a very large proportion of feeble-minded or idiotic children present a history either of epilepsy or of some neurosis associated with and suggestive of that disease. (2.) The so-called epileptic change is not necessarily accompanied with convulsions and insensibility. (3.) As a rule, feeble-minded children manfest their epilepsis in superficial and subjective ways.

Several other papers by Dr. Wm. B. Fish, of Elwin, Pa., Mrs. C. W. Brown, of Barre, Mass., Dr. J. Q. A. Stewart, of Frankfort, Ky., Dr. C. T. Wilbur, of Lincoln, Ill., and Rev. H. M. Greene, of Lawrence, Kan., are published in the Proceedings. These are all worthy of perusal, and will be of value to those persons who are especially interested in the care and management of idiotic and feeble-minded persons.

W. C.

Medical and Surgical Journal.

THURSDAY, APRIL 19, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by Houghton, Mifflin and Company, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 Park Street, Boston, Mass.

THE "IMAGES" SUIT.

A case interesting from a medical, as well as remarkable from a forensic, point of view, has been on trial in this city within the past few days before Judge Aldrich of the Superior Court. The plaintiff, one Lizzie Gannon, sought to recover in the sum of five thousand dollars against Father Fleming, a Roman Catholic priest, and Archbishop Williams, of this diocese. The circumstances in substance were as follows: —

The plaintiff, until the year 1879, was a healthy child, and was a promising pupil in school. At about that time, being then some thirteen years of age, she was taken with attacks of nervous derangement, for which, by medical advice, she was removed from school. During her "trances," as they were called by the family, she saw visions of the "Blessed Virgin and the Immaculate Conception," and presented other well-marked evidences of grave hysteria, for which it was advised that she be removed to a hospital. To this the family objected. Soon after the development of her disease she found herself in possession (miraculously, as she averred) of two bits of paper, which, on being held to the light, disclosed each the figure of an angel. She believed that these images had been sent her by a brother who had died two years before, and who, by the way, appears to have been of inferior intellectual capacity. For these images she entertained a superstitious veneration. Father Fleming, who had, several months before, been summoned by the parents to visit the girl on account of her "trances," called in May, 1879, and persuaded the child to let him have one of the images, actuated, as he claims, by a desire to cure her of her infatuation. She reluctantly consented on his promise to return it the next day. On that day the friends sent for him to come with it, which he did, and on this occasion accidentally tore, as the defendant claimed, intentionally cut, as the plaintiff averred, one of the images in two. The girl thereupon cried, and, as she claims, objected when he took the images away with him. He partially appeased her with beads, and told her he would keep the images for her; he exhibited them occasionally when she came to confession, but at about Christmas mislaid them, and has not been able to find them since. The Gannon family testified that since the loss of the images the girl has been unable to speak except when certain persons held her hands, and that they had made repeated requests both of Father Fleming and of the archbishop for the restoration of the figures. Other manifestations, including the phenomena of stigmata, were described by the family, but the stigmata do not seem to have been witnessed by any physician.

The defense offered evidence that the girl had suffered from inability to speak before the episode of the images, and that on one occasion, when she had been made to speak by laying on of hands, she had inadvertently continued to talk after the hands were removed. It was also proved that she had been heard to talk at other times. Spiritualists have flocked about the child, and when she was in her "trance" states the doors were thrown open to all who cared to see the manifestations. No admission fee was charged, but a descriptive pamphlet was published and sold by the father. The mother began to make quack medicine, and advertised herself as an "eclectic physician." (On cross-examination, by the way, she said she attached no significance to the word eclectic.) The case against the archbishop was dropped on the third day of the trial, as that gentleman disclaimed any authority over his subordinate in matters of spiritual consolation.

The medical evidence consisted of that of Dr. R. M. Hodges, who was the attending physician, and who testified to the patient's hysterical condition as above described. He thought the deprivation of the images might affect her mind unfavorably, but was not prepared to say whether their possession would or would not increase her superstitious delusions.

Expert testimony was also offered by Dr. Channing as to the character of the disease hysteria; that in a hypothetical case described it would be possible for loss of hearing, speech, and sight to follow the removal of such articles as these images. The witness thought, as a rule, it would be wise to remove the objects which excite, but could not say whether, as a medical adviser, he would have at any time taken away the images from the Gannon girl, although he should probably have done so if he had been called to the case at the beginning. He would have returned them if he had found injurious results following.

Dr. Henry G. Clark testified that when he saw the girl at her father's house she was in every way well except that she had no audible speech; her heart, pulse, lungs, and throat were normal; the throat showed no signs of disease; she coughed several times; there was sound enough in the vocal chords to have given voice for speech if she had chosen to use it. Did not regard the loss of the images as the cause of the symptoms which appeared after their loss; the proper treatment of the patient would be to take her from her surroundings, including the images.

In his charge to the jury Judge Aldrich said that if Father Fleming went to the Gannon house as spiritual adviser, and in good faith took the images in order to do good to the child, no damages could be allowed. The case was parallel to that of a physician in regular standing, who is called to administer to a patient, and prescribes for his best good; if the effects of the pre-

scription are bad the physician is not liable. The jury awarded damages in favor of the plaintiff in the sum of one cent.

This child presents a perfect clinical picture of that malady sometimes hard to recognize, always hard to comprehend, that many-sided, vague ailment lying upon the border land between pitiable misfortune and criminal deception, whose victims we alternately have to soothe and to chide. The hystero-epilepsy, so graphically described by Charcot, is, fortunately, as yet uncommon in our country, but the minor forms, with their freaks, complaints, and whims, — who has not inwardly groaned as he has been called to them? The phenomenon of ecstasy, so impressive to all beholders, and particularly to the patient's kindred, was not wanting here. The girl had told a neighbor that she was going to be a medium, and that her family might charge a dollar to see her in her "trances." An aunt had been heard to say that the Lord would repay them through this girl for the expense they had been put to through the sickness of the brother. Certainly the girl was in an atmosphere as well calculated as any to foster such tendencies as she naturally possessed toward spectacular displays.

As to the stigmata which are described by the family, we do not recollect that any case of these phenomena has been observed by any medical man in this country. Of 153 instances given by Dr. Imbert-Gourbeyre only one, Vitaline Gagnon, occurred on this continent, and that was in Canada. With the exception of that illustrious protostigmatist, St. Francis of Assisium, in whose honor Pope Benedict XI. established the feast of the Holy Stigmata in the calendar of the Romish church, all the persons thus suffering (or, as they would say, thus honored) have been women. Christine de Stumbelle, Veronica Guiliani, Palma d'Oria, and, within a few years, Louise Lateau, have all borne upon their bodies these signs of a mystic crucifixion. The palms of the hands, the soles of the feet, and the side (by a trifling discrepancy now right, now left, in different ecstatics) exuded blood, usually every Friday, occasionally only on Good Friday. The skin was usually unbroken, and in the case of Palma d'Oria there was a loss of substance of the frontal bones, which, with other evidence, leads Dr. Hammond to conclude regarding her (1) that she was or had been syphilitic; (2) that she was hysterical; (3) that she suffered from purpura hæmorrhagia; (4) that she was a most unmitigated humbug and liar. Of Louise Lateau, the most celebrated of all the *stigmatisées*, and also subject to ecstasy, the Committee of the Royal Academy of Belgium reported, after careful examination, "that she worked and dispensed heat; that she lost every Friday a certain quantity of blood by the stigmata; that the air she expired contained the vapor of water and carbonic acid; that her weight had not materially altered since she had come under observation. She consumes carbon, and it is not from her own body that she gets it. Where does she get it from? Physiology answers 'She eats.'"[1] This conclusion was confirmed by the sudden opening of a closet in her room, and the disclosure of fruit and bread.

It is usually the members of the medical profession who have to bear the brunt of the vagaries of the hysterical. But here is a case where the attack fell upon a priest also visiting the patient in a professional capacity. While any man thus exposed is entitled to our sympathies, it is, perhaps, not altogether to be regretted that the public has been shown by this case one of the perils to which the medical profession by the nature of their calling are especially liable.

[1] Hammond. Nervous Derangement, page 181.

THE NEW YORK DINNER TO DR. HOLMES.

THE dinner given at Delmonico's last Thursday by the medical profession of New York to Dr. Oliver Wendell Holmes was a very handsome and elaborate affair, and took the form of a compliment such as any one might indeed be very proud to have paid him. The suggestion of the propriety of expressing to Dr. Holmes in some such way the sentiments entertained toward him by the profession in New York having once been made, it was taken up warmly, and a chairman and committee of arrangements appointed who could scarcely fail to make anything in which they might be interested successful. It was thought, however, that, owing to the expensive character of the entertainment, the number of participants would be limited, and we believe the committee were not only surprised but embarrassed by applications for tickets, not only from their professional brethren in New York, but in our other large cities, so that already, two weeks before the day fixed, the seating capacity of the large hall at Delmonico's was exhausted, and further applications had to be refused. About 225 persons sat down to the tables, nearly all of whom were physicians.

A full account of the occasion and report of the speeches was given the following day in the New York *Tribune*, and a more brief report, together with the poem of welcome, will be found in these columns among our New York notes. Dr. Holmes's own poem appeared in most of the daily papers. Speeches by such men as Bishop Clark, Mr. Evarts, George William Curtis, and Whitelaw Reid, representing the other professions, were, as might have been expected, worthy the occasion.

An amusing incident of the dinner was the distribution, by messengers, of rapid telegraph blanks, with a clever sketch of the guest of the evening escaping, with bones under one arm, and books under the other, from a policeman disguised as Governor Butler, who stands on the steps of the Massachusetts State House labeled Tewksbury Investigation; the fugitive directs his hasty steps toward Barker (late Delmonico), who stands on the steps of his hostelry ringing a large dinner bell.

This dinner from the profession in New York has been, we are sure, one of the most gratifying of the many very gratifying tributes which have been so numerously tendered to Dr. Holmes.

SURGEON-GENERAL BARNES.

THE death of the late Surgeon-General occurs at a time when his loss can make little difference to the army or the public. His work was in great measure finished when he left the position of Surgeon-General, and although his name will not be known to future generations as an author, or be attached to any new surgical operation, or identified with any newly-described disease, the profession is still very deeply indebted to him. It is wonderful how much work was done under his supervision, and yet how seldom his own name was obtruded upon the public.

Under his control the medical department of the army reached a high state of efficiency, and he especially displayed that characteristic of high executive ability, the power to select subordinates, and to control them so judiciously as to gain from them their best work. The establishment of the proper status of medical officers and hospitals in time of war was greatly influenced by his insistence that hospital transports should be free from interference from the orders of local or department commanders. We can hardly appreciate at the present day the effect of that order of the War Department which placed hospital transports exclusively under the control of the medical department.

During the Surgeon-Generalship of Dr. Barnes the Army Medical Museum arose, and on the death of President Lincoln found a fitting home in the old theatre consecrated by his death, where it had an opportunity for development, and where those in charge found facilities for the work which does not need mention here; the Army Medical Library found an equal opportunity for growth; the Medical History of the War was begun and practically completed, and the Index Catalogue was conceived and so far advanced as to make its ultimate completion a matter of time only. All of these things owe to him either their inception or an approval and encouragement without which their existence was impossible.

In the closing words of the General Order announcing his death, "His career was one of honor to himself and of great service to his country."

MEDICAL NOTES.

— We are pained to observe that one of our esteemed daily contemporaries treats a distressing subject recently broached by his Excellency the Governor of this State in a manner savoring of that hard-heartedness which has by some persons been considered peculiar to the medical profession.

Apropos to Governor Butler's discovery of the tanned skins at Tewksbury, this journal quotes from Carlyle's "French Revolution," last volume, page 395: "Still deeper into one's heart goes that tannery at Meudon. 'At Meudon,' says Montgaillard, with considerable calmness, 'there was a tannery of human skins; such of the guillotined as seemed worth flaying; of which perfectly good wash leather was made for breeches and other use. The skin of the men," he remarks, 'was superior in toughness, consistence, and quality to shamoy; that of the woman was good for nothing, being so soft in texture. History, looking back over cannibalism in "Purchas's Pilgrimes," and all early and late records, will perhaps find no terrestrial cannibalism of a sort on the whole so detestable. Alas, then, is man's civilization only a wrappage through which the savage nature of him can still burst, infernal as ever. Nature still makes him, and has an infernal in her as well as a celestial.'"

— It has been noticed of late that although the disease is not at all prevalent, nearly all the cases of small-pox occurring in the city are of the hæmorrhagic variety, and the authorities are rather at a loss how to account for the severity of the type. Since the first of January there have been scarcely more than twenty cases of small-pox reported, but the mortality has amounted to nearly fifty per cent.

— In addition to the immense amounts given to the institution during his life, the late Peter Cooper left one hundred thousand dollars in his will to the "Cooper Union for the advancement of science and art."

—The secretary of the Medical Society of the State of West Virginia, which will hold its sixteenth annual session at Grafton, on Wednesday, May 16th, 1883, informs the members that the last meeting was the largest the Society has ever held, and a greater number of medical papers were read than in any previous year. It is confidently expected that this increased interest will be productive of even better results at the coming meeting.

— A physician did some very good police work in Brooklyn the other day. A couple of thieves having robbed a jeweler of a tray of rings jumped into the buggy of a doctor which was standing in front of a house near by and drove off at a rapid rate. They were observed, however, by another physician, who chanced to hear the cry of "stop thief," as he was passing, and who, having taken an officer into his carriage with him, drove furiously after the men. After an exciting chase the thieves, seeing that they were about to be overtaken, jumped to the ground, bounded over a high board fence, ran to the next avenue, and made their escape. The doctor then took the abandoned horse and wagon to the nearest station-house, and sent word to police headquarters. The theft of the team was telegraphed to the central office at 2.35 P. M., and its recovery was telegraphed at 3.15.

— "Dr." Evans, a magnetic healer, announced in a Buffalo paper that one of his women patients, aided by a bogus detective, had blackmailed him. The detective, however, proved to be a genuine one, and has now arrested the "healer" and handed him over to the police authorities as a public fraud.

NEW YORK.

— The complimentary dinner given at Delmonico's Thursday evening, April 12th, by the medical profession of New York, in honor of Dr. Oliver Wendell Holmes passed off very pleasantly, and was thoroughly enjoyed by all present. The arrangements, which had been made by a committee of which Dr. T. Gaillard Thomas was chairman, were entirely satisfactory, and

about two hundred and thirty gentlemen participated in the dinner. The principal table was placed on a dais at the end of the large ball-room in which the banquet was served, and Dr. Fordyce Barker, president of the Academy of Medicine, who presided, occupied the central seat at it. On his right was the honored guest of the evening, and on his left, the Right Rev. Dr. Clark, Bishop of Rhode Island. At this table were also Hon. William M. Evarts, Hon. George William Curtis, Mr. Whitelaw Reid, Dr. William Pepper, Provost of the University of Pennsylvania, Dr. S. Weir Mitchell, of Philadelphia, Dr. John S. Billings, U. S. A., of Washington, Dr. John P. Gray, of Utica, and Drs. Alfred C. Post, S. O. Vanderpoel, Lewis A. Sayre, T. Gaillard Thomas, Thomas Addis Emmet, John T. Metcalfe, John C. Dalton, William Detmold, Thomas M. Markoe, James Anderson, and Isaac E. Taylor, of New York. Opposite this, and at right angles to it, were five parallel tables presided over respectively by Drs. Charles I. Pardee, James H. Anderson, Robert F. Weir, Edward G. Loring, and William H. Draper; and the company was a thoroughly representative one. The *menu* was in the shape of a small portfolio with scarlet plush covers, lined with yellow satin, on the back of which were represented in gold a scalpel and pen crossed and surrounded with a laurel wreath; and the only thing suggestive of the medical profession about the decorations or the dinner were the small paraffine moulds of Yorick's skull, in which the sorbet was served, and which many of the guests preserved as souvenirs of the occasion.

Dr. Barker made a brief and humorous speech of welcome, and introduced Dr. A. H. Smith, who read some verses in which occurred the following lines descriptive of Dr. Holmes: —

"Skilled to dissect with knife or pen
His subjects, dead or living men;
With thoughts sublime on every page,
To swell the veins with virtuous rage,
Or with a syringe to inject them
With sublimate to disinfect them;
To show with demonstrator's art
The complex chambers of the heart,
Or, armed with a diviner skill,
To make it pulsate at his will;
In generous verse to celebrate
The loaves and fishes of some giver,
And then proceed to demonstrate
The lobes and fissures of the liver;
To soothe the pulses of the brain
With poesy's enchanting strain,
Or to describe to class uproarious
Pes hippocampi accessorius;
To move with fervor of appeal
The sluggish muscles into steel,
Or, pulling their attachments, show
Whence they arise and where they go:
To fire the eye by wit consummate,
Or draw the aqueous humor from it;
In times of peril give the tone
To public feeling called backbone,
Or to discuss that question solemn,
The muscles of the spinal column.

. . . . . .

And now, for I really must come to an end,
May the fate of the 'shay' be the fate of our friend;
May he never break down and never wear out,
But a century old, or thereabout,
Not feeling the weight of the years as they fly,
Simply stop living when ready to die."

On rising, Dr. Holmes was greeted with prolonged applause and the waving of handkerchiefs and napkins, and he then proceeded to read, in his own inimitable style, one of those characteristic after-dinner poems, for the exquisite aptness, felicity, and finish of which, as has been well said, he is unrivaled among men of letters past or present.

Addresses were then made by Bishop Clark, who responded for "The Clergy;" by Mr. Evarts, who spoke for "The Bar," and said, in commencing, that it was much pleasanter to be asked to meet three hundred doctors than to ask one to meet you; Mr. Curtis, who responded to the toast "Literature;" Mr. Whitelaw Reid, for "The Press;" and Dr. Thomas, who made a graceful address of eulogy and renewed welcome, and at its close again proposed the health of Dr. Holmes, which was drunk with all the honors.

During his visit in New York Dr. Holmes was also tendered receptions by Dr. and Mrs. Fordyce Barker and by the Century Club.

— The friends of Columbia College are modestly asking for an endowment of four millions for the establishment of a great university in connection with it, and one proposal is, that the present college buildings shall be occupied for the purposes of the University, while new quarters shall be erected for the College proper at Washington Heights, on the Hudson, where it already owns a fine site of twenty acres.

— Barnum, the illustrious showman, having been arrested at the instance of the Society for the Prevention of Cruelty to Children for permitting the performances of a party of youthful acrobats, known as the "Elliott Children," on the bicycle and "unicycle" in his "greatest of all possible shows," invited a number of the medical profession to witness their feats, and the result was that, after the performance, they passed a resolution to the effect that they fully approved and indorsed the exercise; considering it neither morally nor physically detrimental, but rather beneficial, to the children. When the case came up in court several of the physicians testified that the performance was conducive to health, and it was decided that it was perfectly legal: "the facts brought forward not bringing the case under the provisions of the statute."

Although occasionally allowing themselves to be carried away, as in the present instance, by misguided zeal, the authorities of the Society for the Prevention of Cruelty to Children are really accomplishing a most excellent work, as is evident from the report of the Superintendent for the month of March, recently read at the monthly meeting of the Board of Directors of the Society. From this it appears that during the month 209 complaints were received, of which 202 were investigated; in 7 proper advice was given. There were 75 cases prosecuted, which resulted in 73 convictions; 117 children were sent to homes and institutions, and 23 clothed and otherwise cared for.

— "Pilot," the largest elephant, next to "Jumbo," in Barnum's collection, was shot at the Madison Square Garden on April 5th, on account of his wicked disposition. He had once killed a man in London, and as he had lately shown a tendency to do mischief, it

was decided to destroy him, so as to avoid all possibility of future trouble. His carcass weighed 9,175 pounds. Professor Liautard, of the New York Veterinary College, secured the heart and one of the legs, and Mr. Henry Bergh and the Metropolitan Museum of Art also each took a leg.

Correspondence.

AN OPEN LETTER.

To the Members of the Regular Medical Profession in the State of New York.

GENTLEMEN, — Representing a large number of physicians associated to uphold the National Code of Medical Ethics, we beg leave to ask you to consider the importance of the object.

The so-called new Code recently adopted by the Medical Society of the State of New York sanctions fellowship by means of consultations with all practitioners who are "legally authorized to practice medicine." This sanction extends to practitioners who have adopted designations intended to distinguish them as belonging to sects apart from and hostile to the regular medical profession, and who are organized in order to lessen public respect for this profession and for its members. Will you not seriously consider the question whether under these circumstances affiliation by any act with sectarian or irregular practitioners is consistent with a due regard for the honor of the profession, or with a proper sense of self-respect?

The new Code has dissevered all connection by representation, of the Medical Society of the State of New York and its auxiliary county medical societies, with the American Medical Association, and also with the State medical societies of the several States of the Union. At the last meeting of the American Medical Association (1882), the Judicial Council decided as follows: "Having carefully examined the Code of Ethics adopted by the New York State Medical Society at its annual meeting in February, 1882 (as furnished by the secretary of said Society), the Judicial Council find in the said Code provisions essentially different from, and in conflict with, the Code of Ethics of this Association; and, therefore, in accordance with the provisions of the ninth By-Law of the American Medical Association they unanimously decide that said New York State Medical Society is not entitled to representation by delegates in this Association." The following is the By-Law referred to in the foregoing decision: —

"No State or local Medical Society, or other organized institution, shall be entitled to representation in this Association that has not adopted the Code of Ethics, or that has intentionally violated or disregarded any article or clause of the same."

We submit to your consideration that the substitution of the new Code for that adopted by the American Medical Association has inflicted upon the medical profession of this State a great injury and disgrace.

It is believed that the recent action of the New York State Medical Society in relation to the Code of Ethics is not sustained by the sentiments and judgment of the great majority of the medical profession in the State. But even granting that they who are opposed to this action are in the minority, it must be admitted that the number is very large. The effect of the action of the State Society, if persisted in, will be a division of the profession of the State into two parties. In view of the evils which cannot but follow such a division, and the many advantages of harmony, we appeal most earnestly to those who have been led to approve of the substitution of the new Code for that of the National to reconsider the matter, and we solicit the active co-operation of all who are in favor of the National Code in concerted efforts to effect, as speedily as possible, a reversal of the action of the Medical Society of the State of New York at the annual meetings in 1882, and 1883.

Communications from societies and individuals who are in sympathy with associations for upholding the National Code of Ethics and resisting any modifications of that Code which does not emanate from the American Medical Association may be addressed to JOHN H. HINTON, M. D., No. 41 West 32d Street, New York City.

ABRAM DUBOIS, M. D. SAMUEL S. PURPLE, M. D.
J. W. S. GOULEY, M. D. AUSTIN FLINT, JR., M. D.
WM. T. LUSK, M. D. SAM'L T. HUBBARD, M. D.
AUSTIN FLINT, M. D. T. GAIL. THOMAS. M. D.
JOHN H. HINTON, M. D.

INGLUVIN.

MR. EDITOR, — In ornithological anatomy *ingluvies* means the crop; hence we might be justified in the *a priori* supposition that ingluvin is an active principle derived from this portion of the body of some bird. However, the term is nothing but an euphonious misnomer applied to the dried and pulverized horny membrane lining the gizzard of the fowl.

It is claimed that this substance possesses remarkable powers in arresting the vomiting of pregnancy and relieving dyspepsia. Professor Bartholow, in his work on Therapeutics, classes it among the digestive ferments, and testifies to its remarkable therapeutic properties.

I am reminded, by a recent allusion in the JOURNAL to some experiments of Dr. Edes with artificial digestive agents, of certain experiments which I performed last December to determine if ingluvin had any action as a digestive ferment. My experiments, like those of Dr. Edes, negative that assumption. Numerous comparative experiments were performed with ingluvin and pepsin. In cases in which albumen was completely and promptly dissolved by pepsin the albumen in the tubes containing ingluvin was apparently unaffected. The ingluvin and albumen were placed in neutral and weak acid and alkaline solutions, and left for many hours in an artificial digester, and in every case with negative results. Nothing more than a slight conversion of albumen into acid albumen or parapeptone was noticed. This probably was due to the action of the hydrochloric acid, reënforced by a slight amount of pepsin derived from the glandular stomach of the fowl, which had become incorporated with the ingluvin.

Although the results of these experiments showed that ingluvin cannot act like pepsin, and is not a digestive ferment for albumen, still we are not in a position to positively affirm that it has no therapeutical value. The powder has a yellowish color and bitter taste, which it imparts readily to alcohol. If we treat it with alcohol, filter, and evaporate the filtrate, we

obtain a residue, largely made up of sodic chloride, containing a greenish-yellow extractive matter having an intensely bitter taste, which is probably the substance which imparts the bitterness to the powder. It is possible that this bitter substance may have some medicinal action in the stomach. If such is the case it would seem best to employ alcoholic tinctures or extracts rather than the powder itself, for the yellow extract is not removed by water alone.

Very truly yours,

FRED. W. ELLIS, M. D.

MONSON, MASS.

Miscellany.

DR. D. HUMPHREYS STORER.

MANY of his professional associates who have missed the familiar form and face of Dr. D. Humphreys Storer for the last five or six months will be interested to know that he was successfully relieved of a vesical calculus which had been causing him much annoyance for some little time. The operation of lithotrity was performed January 15th last by Dr. Henry J. Bigelow according to his method at a single sitting.

Dr. Storer had given up professional practice since early last summer, but we are glad to hear he is regaining gradually a fair measure of his former energy and elasticity. As a conspicuous representative of a generation of physicians of whom not many are left, we hope he may still be with us for many years.

Dr. Storer was born when the century was still very young, in 1804, at Portland, and is consequently in his eightieth year; and what that implies professionally will be perhaps better appreciated by our younger readers if we remind them that Dr. Storer graduated at the Harvard Medical School in 1825, and that he was one of the founders of the Boston Society for Medical Improvement and of the Tremont Street Medical School in Boston.

He was for nine years, from 1849 to 1858, Visiting Physician at the Massachusetts General Hospital, and for thirteen years Professor of Obstetrics and Medical Jurisprudence in the Harvard Medical School, in which positions many of our readers have no need to be reminded that they enjoyed his instruction.

A FORM OF LOSS OF MEMORY OCCASIONALLY FOLLOWING CRANIAL INJURIES.

MR. JOSEPH BELL writes in the *Edinburgh Medical Journal*, February, 1883, on this subject. Leaving out of account the instantaneous unconsciousness accompanying injury, also the symptoms due to inflammation or to compression, and the later derangements ascribable to softening, he says: —

"What I wish to direct your attention to is, that in a certain number of head injuries, in addition to and after recovery from the early symptoms, which I have classed under the first or primary phenomena, it is found that the victim has, much to his own surprise, forgotten entirely not the accident itself and the succeeding circumstances only, but a certain length of time varying in different cases from minutes up to hours, and even days, with all its actions, pains, and pleasures, before the accident happened.

"This is so unexpected, and it is so difficult to explain, that I fancy it is often missed (*a*) by the patient not liking to confess it; (*b*) by the doctor putting it down to intoxication before the injury. For the last ten years I have kept this point in view in every serious case of head injury I have seen; and after excluding every doubtful case, such as accidents happening to drunk, or narcotized, or exhausted people, and all cases where delusions were present from inflammation or pressure, a residuum remains of intelligent, healthy, sensible, adult cases, who after complete recovery have found that they have lost utterly from their memories hours and even days which they had spent in perfect health and vigor prior to the accident which rendered them unconscious."

A number of illustrative cases are given, and in explanation the writer suggests the twofold action implied in memory, (1) that of recording impressions, (2) that of recalling them by an act of volition or re collecting them; moreover, that these injuries described have in some way destroyed the recording power for a time, or at least prevented a certain amount of phenomena from being recorded at all. For none of the cases have any loss of power of recall or recollection. They can go back to the past long beyond their injury with perfect accuracy; there are no delusions, no hiatuses.

The writer suggests that this gives us the hint that for a safe record a certain amount of time is needed, as a photograph needs a certain amount of exposure, and if this is interfered with the picture is blurred or wiped out.

"WINTER CHOLERA."

THE secretary of the Connecticut State Board of Health reports for February that: —

"There has been a peculiar type of disease in the State, which as far as I can learn appeared for the first time in New England this winter. I refer to what is called winter cholera. It was prevalent in Providence, R. I., and followed shortly after in Waterbury. Last year there were accounts of it in certain Western cities. It appears in an epidemic form. No local cause has yet been found to be even usually associated with it. The disease is wrongly called cholera, for it does not produce death directly, and very rarely, if ever, indirectly. The symptoms are profuse watery discharges which evidently come from the blood, severe cramps, a pinched, sunken countenance, that is, the eyes appear sunken. After well established there is a cold stage, the temperature falling to 97° F., and cases are reported as low as 96° F., the average temperature in health being 98.5° F. The average duration is four days. The symptoms somewhat resemble those of cholera, hence the name. Thus far cities only have been attacked. I have learned of no genuine cases originating in the country. In most places the cases have been mainly among the prosperous, well-to-do citizens. In only one epidemic have I learned that a cause was assigned that was at all probable. There the poor living in tenement houses only were seized, and suetine, or rather lard butter, which was poorly prepared, was charged as the cause, but this appears hardly probable, as no such association has been since found to exist. It is a peculiar disease, but easily controlled by treatment. A few cases similar to the winter cholera are reported from Cheshire."

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 7, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Measles.
New York	1,206,590	746	275	19.43	25.32	5.23	3.75	3.22
Philadelphia	846,984	462	149	13.39	12.74	4.96	5.40	1.22
Brooklyn	566,689	—	—	—	—	—	—	—
Chicago	503,304	247	126	20.60	15.35	7.67	3.23	—
Boston	362,535	203	59	16.24	22.14	5.41	3.44	.98
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	201	72	19.60	11.76	6.86	3.43	.49
Cincinnati	255,708	118	51	18.70	26.35	2.55	4.15	1.69
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	110	15	12.72	18.18	2.72	5.45	—
Pittsburg (1883)	175,000	60	23	10.00	28.00	3.33	1.66	—
Buffalo	155,137	51	17	15.68	19.60	3.92	3.92	—
Milwaukee	115,578	54	31	20.35	18.50	5.55	9 25	—
Providence (1883)	116,755	—	—	—	—	—	—	—
New Haven (1883)	73,000	24	7	8.32	33 28	—	—	4.16
Charleston	49,999	30	6	6.66	3.33	3.33	—	—
Nashville	43,461	35	16	20.02	14.30	—	—	8.57
Lowell	59,485	24	8	12.48	4.16	—	—	—
Worcester	58,295	20	8	—	30.00	—	—	—
Cambridge	52,740	25	7	—	16.00	—	—	—
Fall River	49,006	31	15	35.42	—	6.44	—	—
Lawrence	39,178	15	3	6.66	13.33	6.66	—	—
Lynn	38,284	17	3	—	35.28	—	—	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	13	5	30.76	—	7.69	—	7.69
New Bedford	26,875	7	1	—	14.29	—	—	—
Somerville	24,985	13	5	7.69	23.08	7.69	—	—
Holyoke	21,851	11	7	36.36	18.18	9.09	—	18.18
Chelsea	21,785	13	3	15.48	—	—	7.69	—
Taunton	21,213	6	2	—	33.33	—	—	—
Gloucester	19,329	7	4	28.56	—	—	14.28	—
Haverhill	18,475	8	1	—	12.50	—	—	—
Newton	16,995	4	0	—	—	—	—	—
Brockton	13,608	2	1	—	50.00	—	—	—
Newburyport	13,537	2	1	—	—	—	—	—
Fitchburg	12,405	1	1	—	—	—	—	—
Malden	12,017	—	—	—	—	—	—	—
Twenty-two Massachusetts towns	161,159	69	17	11.59	11.59	1.45	2.89	—

Deaths reported 2629 (no reports from Brooklyn, St. Louis, New Orleans, and Providence): under five years of age 939: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 439, lung diseases 492, consumption 375, diphtheria and croup 128, scarlet fever 89, measles 38, diarrhœal diseases 35, typhoid fever 32, erysipelas 23, cerebro-spinal meningitis 22, whooping-cough 21, small-pox 17, malarial fevers 17, puerperal fever 17. From *diarrhœal diseases*, New York 11, Chicago eight, Boston six, Fall River five, Baltimore, Cincinnati, Charleston, Salem, and Holyoke one each. From *typhoid fever*, Philadelphia 15, New York four, Chicago and Boston three each, District of Columbia two, Baltimore, Cincinnati, Buffalo, Lowell, and Fall River one each. From *erysipelas*, New York six, Philadelphia five, Chicago three, Boston, Cincinnati, and District of Columbia two each, Baltimore, Buffalo, and Milwaukee one each. From *cerebro-spinal meningitis*, New York nine, Baltimore two, Philadelphia, Chicago, Boston, Cincinnati, Pittsburg, New Haven, Lowell, Fall River, Gloucester, Quincy, and Peabody one each. From *whooping-cough*, New York nine, Cincinnati six, Philadelphia, Chicago, Pittsburg, Milwaukee, Chelsea, and Spencer one each. From *small-pox*, Baltimore 11, Nashville four, New York and Philadelphia one each. From *malarial fevers*, New York 11, Chicago four, Baltimore and Fall River one each. From *puerperal fever*, Chicago four, New York three, Buffalo two, Boston, Baltimore, Cincinnati, District of Columbia, Pittsburg, Milwaukee, Lowell, Fall River, and Chicopee one each.

Twenty-eight cases of small-pox were reported in Baltimore, Pittsburg three, Buffalo three, District of Columbia one; scarlet fever 29, diphtheria 14, typhoid fever one in Boston; scarlet fever 31, and diphtheria eight in Milwaukee.

In 38 cities and towns of Massachusetts, with an estimated population of 1,133,467 (estimated population of the State 1,922,530), the total death-rate for the week was 21.74 against 22.21 and 19.14, for the previous two weeks.

For the week ending March 10th, in 166 German cities and towns, with an estimated population of 8,737,203, the death-rate was 24.5. Deaths reported 4281: under five years of age 1850; consumption 701, lung diseases 547, diphtheria and croup 195, diarrhœal diseases 117, scarlet fever 77, whooping-cough 47, typhoid fever 38, measles and rötheln 31, puerperal fever 24, small-pox (Heilbronn, Canstatt, and Kraeuznach one each) three, typhus fever (Gorlitz and Braunschweig one each) three. The death-rates ranged from 16.4 in Metz to 46.1 in Zwickau; Königsberg 24.9; Breslau 29.8; Munich 34.5; Dresden 23.8; Berlin 23.2; Leipzig 22.7; Hamburg 30; Cologne 32.2; Frankfort a. M. 18.4.

For the week ending March 17th, in 173 German cities and towns, with an estimated population of 8,734,151, the death rate was 27.9. Deaths reported 4691; under five years of age 2071; consumption 776, lung diseases 682, diphtheria and croup 232, diarrhœal diseases 141, scarlet fever 76, whooping-cough 60, measles and rötheln 58, typhoid fever 55, puerperal fever 21, small-pox (Heilbronn two, Stuttgart and Zittau one each) four. The death rates ranged from 16 in Wiesbaden to 47.1 in Wurzburg; Königsberg 28.7; Breslau 28; Munich 32.1; Dresden 26.7; Berlin 25; Leipzig 26.6; Hamburg 28.7; Cologne 29.4; Frankfort a. M. 28; Strasburg 33.5.

In the 28 great towns of England and Wales, with an estimated population of 8,620,975, for the week ending March 24th, the death-rate was 26.1. Deaths reported 4304: acute diseases of the respiratory organs (London) 598, whooping-cough 99, scarlet fever 81, measles 55, fever 47, diarrhœa 37, small-pox (Newcastle four, London three, Leeds one) eight. The death-rates ranged from 18.9 in Derby to 32.9 in Hull; Bradford 19.9; Bristol 20.6; Brighton 24.4; London 24.9; Leeds 27.1; Nottingham 28.5; Liverpool 32.4. In Edinburgh 17.5; Glasgow 36.3; Dublin 40.4.

For the week ending March 24th, in the Swiss towns, population 494,390, there were 57 deaths from lung diseases, consumption 40, diarrhœal diseases 17, diphtheria and croup 10,

measles four, scarlet fever three, erysipelas three, whooping-cough two, typhoid fever two, small-pox one. The death-rates were, at Geneva 20.5, Zurich 22, Basle 23.8, Berne 41.8.

The meteorological record for the week ending April 7th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
April, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 1	30.077	33	41	22	64	40	57	54	N	NW	W	10	10	7	C	C	C	—	—
Mon., 2	30.164	35	43	27	68	51	72	64	NW	E	SW	7	11	3	C	C	C	—	—
Tues., 3	30.113	35	47	28	50	54	69	58	N	SE	SE	7	9	8	C	F	C	—	—
Wed., 4	30.183	43	52	32	51	44	68	58	NW	W	SW	9	13	1	C	C	O	—	—
Thurs., 5	29.828	49	60	39	79	74	93	82	S	SW	SW	9	6	2	R	O	O	—	—
Fri., 6	29.795	51	58	45	80	48	68	65	SW	N	N	12	18	3	O	C	C	—	—
Sat., 7	29.945	35	46	31	100	100	100	100	NW	NW	W	5	20	5	S	F	C	—	—
Means, the week.	30.015	40	50	32				69										20.53	.44

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM APRIL 6, 1883, TO APRIL 13, 1883.

BARTHOLF, JOHN H., captain and assistant surgeon. The extension of leave of absence for twenty-three days by S. O. 37, C. S., Department of the Columbia, further extended one month. Paragraph 1, S. O. 31, Military Division of the Pacific, April 3, 1883.

GIBSON, R. J., captain and assistant surgeon. Relieved from duty at Cantonment on the Uncompahgre, Colorada, and assigned to duty at Fort Hayes, Kansas. Paragraph 1, S. O. 73, Department of the Missouri, April 7, 1883.

CORRECTION.

IN the notice of Dr. Hyde's book in the JOURNAL of April 12, 1883, page 352, in the eighth line from the bottom, "irritability" should read "instability."

AMERICAN MEDICAL ASSOCIATION.

THE thirty-fourth annual session will be held in Cleveland, Ohio, on Tuesday, Wednesday, Thursday, and Friday, June 5, 6, 7, 8, 1883, commencing on Tuesday at eleven A. M.

SECTIONS.

"The chairmen of the several Sections shall prepare and read, in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective Sections. . . ." *By-Laws*, Art. II., Sect. 4.

Practice of Medicine, Materia Medica, and Physiology: Dr. J. H. Hollister, Chicago, Ill., Chairman. Dr. J. G. Lee, Philadelphia, Secretary.

Obstetrics and Diseases of Women and Children: Dr. J. K. Bartlett, Milwaukee, Wis., Chairman. Dr. G. A. Moses, St. Louis, Mo., Secretary.

Surgery and Anatomy: Dr. W. F. Peck, Davenport, Iowa, Chairman. Dr. P. F. Eve, Nashville, Tenn., Secretary.

State Medicine: Dr. Foster Pratt, Kalamazoo, Mich., Chairman. Dr. T. L. Neal, Dayton, Ohio, Secretary.

Ophthalmology, Otology, and Laryngology: Dr. A. W. Calhoun, Atlanta, Ga., Chairman. Dr. Carl Seiler, Philadelphia, Secretary.

Diseases of Children: Dr. R. F. Blount, Wabash, Ind., Chairman. Dr. J. H. Sears, Waco, Texas, Secretary.

Oral and Dental Surgery: Dr. D. H. Goodwillie, New York City, Chairman. Dr. T. W. Brophy, Chicago, Ill., Secretary.

A member desiring to read a paper before any Section should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements at least one month before the meeting. — *By-Laws.*

Committee of Arrangements. — Dr. X. C. Scott, 393 Euclid Avenue, Cleveland, Ohio, Chairman.

AMENDMENTS TO THE CONSTITUTION.

Offered by Dr. N. S. Smith, Dakota; "To provide for the admission to membership of two delegates from the Medical Bureau of the United States Indian Service, to be nominated by the Surgeon-in-Chief of that Bureau, and approved by the Secretary of the Interior."

Offered by Dr. J. M. Toner, D. C.: "That the office of Permanent Secretary be vacated, and that the Nominating Committee hereafter annually nominate a secretary who will serve without compensation."

Offered by Dr. F. Pratt, Mich.: "That the law requiring the nominations for officers to be made *from those members present at the annual meeting*, shall apply only to the President, Vice-Presidents, Chairmen and Secretaries of Sections, the Assistant Secretary, the Chairman of the Committee of Arrangements, and the Judicial Council."

Offered by Dr. J. M. Keller, Ark.: "To permit the holding of the annual meeting as late as the first Tuesday of September, if desirable."

Offered by Dr. J. H. Sears, Ark.: "That the Chairman and Secretary of each Section may add any number of earnest workers to their Sections, in addition to those named by the Nominating Committee, and that the Librarian be made a permanent officer."

AMENDMENT TO THE BY-LAWS.

Offered by Dr. J. W. Smith, Iowa: Art. II., Sect. 8. Permanent Members: strike out the words "but without the right of voting." WM. B. ATKINSON, M. D., *Permanent Secretary.*
PHILADELPHIA, 1400 PINE STREET, S. W. COR. BROAD.

BOOKS AND PAMPHLETS RECEIVED. — Trichinæ: their Microscopy, Development, Death, and the Diagnosis and Treatment of Trichinosis. By W. C. W. Glazier, M. D., Assistant Surgeon Marine Hospital Service. Illustrated with Seventeen Wood-Cuts. Published by the Illustrated Medical Journal Company, Detroit, Mich.

Therapeutic Handbook of the United States Pharmacopœia, being a Condensed Statement of the Physiological and Toxic Action, Medicinal Value, Methods of Administration, and Doses of the Drugs and Preparations in the latest Edition of the United States Pharmacopœia (Apothecaries' and Metric System), with some Remarks on Unofficinal Preparations. By Robert T. Edes, A. B., M. D. (Harv.) New York: William Wood & Co. 1883.

Fortieth Annual Report of the Managers of the State Lunatic Asylum at Utica. For the Year 1882. Transmitted to the Legislature January 10, 1883. Albany. 1883.

Lectures.

FORCE PRODUCTION.

A LECTURE AT THE HARVARD MEDICAL SCHOOL.[1]

BY PROF. H. P. BOWDITCH, M. D.

The blood has been said to have the following five functions: (*a.*) To convey from the alimentary canal to the various organs and tissues of the body the materials whose decomposition furnishes the force manifested there. (*b.*) To distribute from the lungs the oxygen necessary for the complete using up of the force-producing material, and for oxidizing the products of decomposition of the tissues. (*c.*) To convey material for building up the tissues. (Nutrition in its narrowest sense.) (*d.*) To convey the products of decomposition of the tissues and fluids of the body to the organs destined to excrete them. (*e.*) To distribute and regulate the heat in various parts of the body. The consideration of these five functions, and of the organs associated with them, includes the whole of physiology so far as it relates to the life of the individual. We have already followed the course of food through the processes of mastication and deglutition into the alimentary canal; have studied the action of saliva, gastric juice, pancreatic juice, and bile; have seen how part of the material is absorbed into the circulation by means of the lacteals and blood-vessels, and now, next in order, I will call your attention to the production of force in its various forms, and to the materials which furnish that force. Owing to the unsatisfactory condition of organic chemistry it is impossible to follow the food through its various stages of retrograde metamorphosis within the body, and to trace the corresponding liberation of energy. We must, therefore, be content to study (1) the ingesta, (2) the products of decomposition which are excreted, and (3) the forces which are set free as a result of this decomposition. By varying the conditions under which this force production occurs we can reach certain conclusions with reference to the nature of the process.

Referring briefly to a former lecture you will remember that food is divided into two main classes, nitrogenous and non-nitrogenous. Non-nitrogenous food is further divided into fats and starches. Now the first question is how are the products of decomposition of these different articles of food excreted? The earliest experiments on this point are those of Bidder and Schmidt. They analyzed the urine and the fæces, and, from the amount of nitrogen present, estimated the amount of nitrogenous material decomposed in the body. They also, from an examination of the CO_2 excreted in the expired air, estimated the amount of non-nitrogenous decomposition. They based their calculations upon Liebig's theory that in the urine and fæces all the nitrogen of the food is excreted. Bischoff and some other observers, however, subsequently denied this, maintaining that so far from finding all the nitrogen which goes in with the food coming out with the fæces and urine, there is a large deficit, sometimes amounting to thirty per cent., and that from these excretions alone the amount of nitrogenous material decomposed in the body can not be determined, because gaseous nitrogen may be excreted in the lungs and also from the skin. In investigations of this sort it is very difficult to arrive at absolutely correct results, for errors may creep in in the analysis of the food. It is difficult to find food which will be eaten with a relish (and to study the normal action there must be a relish), which can be subjected to accurate elementary analysis. In the second place, errors are likely to occur in collecting the excreta, especially where the animals used as subjects are kept in cages, and their urine collected as it flows out of the cage in jars, for under these circumstances a certain loss by decomposition is likely to take place. Various expedients have been resorted to to avoid these errors, such as training dogs to pass their urine at command, or drawing it by the catheter. In an elaborate series of experiments Professor Voit, of Munich, has demonstrated very clearly that when the investigation is made with all the necessary precautions this nitrogen deficit does not exist. This was the result of experiments on men, dogs, horses, birds, and silkworms, these last being employed for the sake of extending the observations over as wide a range of animals as possible. It is only fair to say, however, that Seegen, of Vienna, has reopened the question, and has thrown doubt upon some of Voit's conclusions, leaving the matter still unsettled, though most physiologists accept Voit's results as satisfactory. The nitrogen of the fæces exists, of course, chiefly in the form of albuminoid material which has not been digested, but it is none the less important to take it into account in striking a balance between the ingesta and egesta. According to Professor Voit this decomposition of albuminoid materials into urea takes place partly in the tissues themselves and partly in the blood and lymph circulating around and through the tissues. The first part, which forms a constituent portion of the body, he calls organized albumen, while to that which is contained in a liquid form in the blood and lymph he gives the name of circulating albumen. Organized albumen resists decomposition very firmly, but circulating albumen is undergoing constant decomposition. That albumen exists in the body in two states, differing from each other in their stability, is an undoubted fact, and Professor Voit's theory has to this extent a sure foundation, but in regard to the place and manner of decomposition the theory is to be regarded merely as an exceedingly probable hypothesis.

As to the effects produced by feeding an animal with different kinds and amounts of food, experiment has shown that when a dog is supplied with just enough nitrogenous food to keep him in good condition the amount of nitrogen excreted in the fæces and urine just equals the amount given in the food, and conversely when the amount of nitrogen in the fæces and urine is equal to that of the food the condition of the animal is said to be one of nitrogen equilibrium. If a dog is fed a certain amount of albumen, and excretes an equal amount, he receives just the amount which is needed, but if more albumen is fed nitrogen is stored up in the tissues for future needs, while if less is fed the animal gradually starves, excreting nitrogen to the last. A few figures in regard to a merely hypothetical case may serve to make this point clearer. Suppose a starving dog excretes an amount of nitrogen corresponding to fifty grammes of nitrogenous food. If, now, this dog receives fifty grammes of nitrogenous food a day he will be found to excrete, not fifty, but seventy grammes, that is, there is a deficit of twenty grammes a day, and the animal is slowly starving. Now give him seventy grammes of nitrogenous food a day, and instead of his excretion remaining constant he excretes eighty

[1] Reported by W. D. Bidwell. Revised by Professor Bowditch.

grammes, that is, there is still a deficit of ten grammes, and he is still starving, but more slowly than at first. Now feed him eighty grammes, and he excretes eighty-five. Finally, if he receives eighty-five grammes daily the excretion remains the same, that is, he gets enough nitrogen for his needs, and has reached the nitrogen equilibrium. If he receives more than this amount of nitrogenous food, say ninety grammes, he at first excretes but eighty-five grammes, the balance being stored up in the tissues, but if the same amount of ninety grammes be fed for several days his excretions of nitrogen will gradually increase to that limit. In other words the nitrogen equilibrium may be reached at various points, the lowest being that at which the supply is just sufficient to balance the daily loss. On the other hand, if the animal be fed on non-nitrogenous food the amount of nitrogen excreted at first is nearly equal to that excreted when the supply and need balanced, but rapidly decreases till it reaches a tolerably constant excretion, representing the destruction of organized albumen. Here it should be stated that when more nitrogen is taken in than the minimum necessary to keep the body in nitrogen equilibrium, the effect of the surplus is to put the body in better condition for performing work. Knowing, then, the chemical composition of fresh meat, dry albumen, etc., we find that 3.4 grammes of nitrogen is equivalent to 100 grammes of fresh meat; also that 15.6 grammes of nitrogen is equivalent to 100 grammes of dry albumen. This amount of dry albumen will contain, besides the nitrogen, hydrogen, and oxygen, 50 grammes of carbon. Besides the amount of carbon that comes out in CO_2 from the lungs a certain amount is excreted in the urea, twenty per cent. of which is carbon, so that having examined the nitrogen excretion, and determined the amount of albuminoid material which must have been decomposed to furnish it, and having made the proper allowance for the carbon contained in this albuminoid material, we can say that any amount of carbon which appears in the urea or in expired air over and above that corresponding to the albumen must be derived from non-nitrogenous food. Now, having determined the amount of nitrogen excreted in the urine and fæces, and the carbon excreted in the urea and from the lungs, we know that a certain amount of nitrogenous and non-nitrogenous decomposition has taken place. In other words, we have a test by which we can determine the amount and kind of organized material undergoing decomposition in the body in a given time.

What causes this decomposition, this retrograde metamorphosis? When physiological chemistry was in its infancy, in the days of Lavoisier, it was supposed that it was due to the presence of inspired oxygen, but very soon it was found that the mere presence of oxygen was not sufficient to cause such a change, that though oxygen must be present to enable the final products of decomposition to be excreted, still it might be present and no change take place. The real cause is as yet unknown, but must be sought for in connection with the living protoplasm with which the organic substances of the food are brought in contact. It is well known that many chemical compounds, the constituents of which have only a feeble affinity for each other, may be broken up by dialysis or filtration. Alum, for instance, is a substance which is composed of elements whose chemical union is so slight, and which differ in rapidity of filtration to such a degree, that it may be broken up into an acid and a base by filtering. It is not improbable that the living tissues through which the products of digestion diffuse may play a similar part in initiating decompositions.

Let us next consider the food ingested with reference to the energy to be liberated by its decomposition. This gives rise to several problems. In the first place, the object of taking food may be to provide the body with materials to set free mechanical force, that is, to get as much muscular strength as possible; or, in the second place, it may be to enable the body to produce as much heat as possible; or, thirdly, the problem may be to increase glandular activity, to stimulate the secretion of milk in nursing women, for example; fourthly, it may be desired to restore or to build up the tissues, as in convalescence from an exhausting disease; or, fifthly, to build up and strengthen the nervous system, and enable it to act with ability and promptness. Thus there is a variety of problems depending on the kind of force wanted. It will be noted that only in the first two classes is any energy set free from the body. In these two the condition of affairs outside the body of the individual may be directly altered. In the other three the results are confined wholly to the body and within the body. We will now proceed to take these up in order, and we will begin with that form of energy known as motion or mechanical work.

Original Articles.

A CASE OF COMPLETE INVERSION OF THE UTERUS,[1] TREATED BY THE MODERN METHOD, WITH RULES FOR CARRYING OUT THE PROCEDURE.

BY CLIFTON E. WING, M. D., BOSTON.

SOME time ago[2] I reported to this Society a case of inversion of the uterus of fourteen months' duration successfully replaced by the "continued gentle pressure" plan of treatment, without the use of anæsthetics, and without pain to the patient. The following case, treated by the same simple means and with equal success, will serve as another example of the advantages of this method.

The case was seen in consultation with Dr. Moulton, of Lawrence, Mass.

The patient was a primipara, aged nineteen. Of the confinement the doctor writes me as follows: "Mrs. ——'s labor commenced about twelve o'clock on the night of December 7th, and was completed December 8th, about eight o'clock P. M. It was, to all appearances, a natural instrumental delivery, that is, nothing occurred different from usual in forcep cases. We (Dr. Dana was present in consultation) waited fifteen or twenty minutes, and then made slight traction upon the cord. The placenta came without any particular assistance, as usual, but immediately after it occurred complete inversion of the uterus. There was great flooding. The placenta was somewhat attached to the inverted fundus, but was easily removed. I pushed the protruded uterus back into the vagina at once, but did not feel justified in doing anything further at the time on account of the patient's exhausted condition, for she became pulseless and we feared immediate death; but, under brandy,

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, February 14, 1883.
[2] November 29, 1879.

opiates and ergot, she rallied towards morning. She gradually gained strength up to the time when you saw her on the thirteenth day."

At the time of my first visit, Mrs. ——'s pulse was small and feeble, about 120 in the minute, but she was comfortable, without fever, and of excellent courage. Examination found the uterus, completely inverted, lying in the vagina. Upon compressing it with the fingers a distinct gurgling was heard, and I have little doubt that a coil of intestine was inside the inversion. The placental site was at the lowest portion, and I had the rare opportunity of plainly seeing the condition of this part two weeks after delivery in the living woman. The surface was very rough and irregular, and looked as much like the opened surface of a good-sized carbuncle as anything I can compare it with. Here and there were yellow masses looking like the sloughy tissue seen in carbuncles, some being depressed, others elevated above the surface. From the appearance I was at first doubtful whether portions of the placenta were not still remaining, but the doctor told me that the placenta had come away as complete as usual. The result showed that he was right, for at the end of a fortnight the surface had become as smooth as the rest of the mucous membrane, and during this time nothing was noticed coming away. I could not help thinking how easy it would be, with such an irregular surface in a uterus in normal position, to introduce placental forceps and remove what might easily be mistaken, from gross appearances, for "remains of placenta."

The upper vagina was very large and lax after the confinement, and the largest stem I could introduce through its entrance did not fill its cavity so that I much feared it would slip off to one side of the inverted organ when the pressure was applied. However, I did the best I could with the stems I had with me, and applied the waistband and elastic tubes, giving me the desired pressure. Next day it was found that the stem had slipped to one side in the vagina, as I feared it would, and nothing had been accomplished. I made no further attempt at reduction for two weeks. I had been in doubt as to the expediency of keeping the hard end of the wooden stem pressing upon the part in such condition. Two weeks later I made another attempt. To avoid the difficulty encountered before (the slipping of the stem to the side of the inversion), I took a wooden stem of a size easily passed into the vagina and fastened to its upper end a "Gariel Inflated Pessary" of such size that, when blown up, it completely filled the cavity of the vagina; introduced collapsed, it was inflated through its hollow tube after it had passed the constricted vulva, and then the apparatus could not slip off the uterus. I applied the pressure as before and left the patient. Twenty-four hours afterward the fundus had retreated through the dilated cervix. A similar wooden stem, small enough to pass inside the cervix and follow up the retreating fundus, was then substituted, and on my visit the succeeding day the womb was found fully replaced, its cavity measuring somewhat over three inches. The only inconvenience complained of by the patient during the treatment was that incident to lying still upon one side while the apparatus was on. I learn from the doctor that the patient made a rapid recovery of strength, and is now visiting friends at a distance.

In recent years decided changes have taken place in the treatment of chronic inversion of the uterus, and the modern method, namely: *Relying entirely upon gentle continued pressure properly applied to the inverted organ* to perform the cure of the patient, for such it can certainly be termed, would seem to leave but little room for improvement in the future.

When it is considered that this method is almost sure as to its result, is usually entirely painless, does not necessitate the use of anæsthetics, is so simple that any physician can conduct it successfully with apparatus improvised for the occasion, can be carried out without even exciting the fears of an ordinarily sensible patient if the practitioner previously explains to her his purpose and method, and, finally, that it leaves the woman unmutilated and again capable of maternity,[1] the gain, from the time — only a little while ago — when amputation of the inverted organ, with its attendant great fatality, was the sole resource of surgery, can be appreciated.

So many advantages has this latest method over all other plans of treatment which have been tried, and its results, when it is properly carried out, have been so successful, that I believe we are now in position to assert that *in all cases of inverted uterus — excepting of course certain cases seen immediately after the accident has suddenly happened in childbirth, before the cervix has had a chance to firmly contract — attempts at reduction by any other means than by continued moderate pressure applied to the inverted organ by mechanical apparatus are best dispensed with.* At the least they should be postponed until this method, *properly tried*, has failed, and in the rare cases where this happens, if it happens at all, it is hard to say what method of replacement will succeed. Amputation of the inverted uterus bids fair to become an extinct operation.

The following rules, some of them directly opposed to what is taught in the leading text-books, may be laid down for the conduct of the operation: —

(1.) *The pressure is to be confined to the part inverted.*

This is accomplished by the employment of some form of vaginal stem repositor, the upper end of which is brought to bear upon the inverted part. Aveling's instrument is curved, corresponding with the curve of the pelvis. I have used straight stems and found them perfectly satisfactory.

The elastic vaginal bag distended with air or water should not be depended upon in these cases. This is the means commonly recommended and employed. With it the pressure cannot be confined to the displaced uterus. It is both inefficient and injurious. "The bag being in contact with the vaginal walls over a much larger surface than it is in contact with the inverted uterus, in accordance with well-known laws much more of its power is expended in dilating the vagina and stretching the surrounding tissues than in elevating the uterine body. This very distention of the vagina, if the bag be forcibly inflated of itself, often causes more pain than the patient can bear, as is well known by many who have employed such bags as vaginal tampons in cases of uterine hæmorrhage. When success has followed the use of the vaginal bag in cases of inversion either the vagina and surrounding tissues have been remarkably tolerant of distending force or, as has undoubtedly been the usual case, the uterus has been replaced by remarkably little contin-

[1] The patient whose case I previously reported, where the inversion had lasted more than a year, has since had a child, the labor being, in every way, normal.

ued pressure exerted upon it. It is evident that a full and fair trial of continued pressure cannot be made in this way. Although the inefficiency of the elastic vaginal bag has been repeatedly pointed out and written about, it is still resorted to in such cases: and when it has been found on trial that the patient could not bear its continued use, or that it did not replace the uterus, the operators, often those who might be expected to know better, have generally concluded that the uterus was too sensitive for continued pressure treatment, or that pressure faithfully tried had proved a failure. Often, too, the pelvic pains and tenderness caused simply by the distention have been mistaken for the symptoms of pelvic peritonitis."

There is no better or simpler device for producing the desired pressure than two pieces of elastic rubber tubing (that which is attached to the common household syringe does excellently) passed between the thighs and tied by their middle to the outer end of the stem used, their ends being brought up, before and behind, and tied to a waistband, which may be nothing but a common towel folded and fastened about the body.

By regulating the tension of these elastic cords both the amount and the direction of the pressure can be easily controlled.

(1.) The use of an inflated cushion attached to the upper end of the rigid stem is, so far as I know, new. In this case it was used, as explained before, to prevent the stem from slipping off and by the inverted organ. It answered its purpose perfectly, and moreover made such a soft pad to press against the mucous membrane of the womb that I think it would be a good idea to use such a one, of proper size, in every case. Still the part bears the pressure better than might be expected. The device is a simple one, and it would seem might occur to any one's mind; but in recently looking up cases of inversion reported in the journals, I was interested to find in the *Dublin Journal of Medical Science*, 1881, the report of a case occurring in the practice of Dr. Loombe Atthill, of the Rotunda, Dublin, in which the same difficulty was experienced that I had found on my first attempt at reduction in this case (that is, the upper end of the stem could not be kept on the womb). In Atthill's case both Aveling's and White's methods and instruments were tried with the same failure, and finally amputation of the displaced organ was resorted to. I have no doubt that a simple contrivance like the one employed by me would have avoided the difficulty and rendered the operation unnecessary.

(2.) *To avoid risk of septicæmia the vaginal stem should be removed at proper intervals and the parts thoroughly cleansed.*

(3.) *All attempts at manual reduction (taxis) during the treatment are to be avoided.* "They are unnecessary, must add to both the mental and the physical sufferings of the patient, and, moreover, rob the method of its greatest advantage, its simplicity."

(4.) "*A pad or other counter-pressure on the abdomen," recommended in such cases by some writers, should not be employed.*

The action of the vaginal walls in gradually and constantly pulling open the cervix, or, when the cervix has resumed its proper position, the constricted portion above, thus aiding the inversion to gradually unroll itself and assume its natural position, does not come into play until the vaginal walls are put upon the stretch, and pressure upon the abdomen tending to keep the whole uterus low must act to prevent this. Moreover it must oppose the action of the vaginal stem in pushing the inverted fundus upward.

(5.) *Anæsthesia is not to be employed unless specially indicated in the given case.*

The process from first to last is not a painful one. The patient being conscious, the physician can better judge of the amount of pressure which it is advisable to use, and the risk of doing harm is lessened.

The view formerly held that the difficulty of reduction increases in proportion to the duration of the inversion has been proven to be erroneous by the results of cases treated by this method, and in certain cases of acute inversion at childbirth where the shock is very great (as with the patient whose case I report), and hæmorrhage does not make immediate interference a necessity, probably the chances of the patients will be increased by postponing for a while all attempts at reduction. This however is a rule of procedure to be followed in but few cases if the physician is present immediately the accident has happened, but we know that the chance of reduction becoming impossible at a later period is now reduced to a minimum. In my previous case, where complete inversion had existed fourteen months, reduction was accomplished with as much ease as in this case of only four weeks' duration. Post-mortem examinations have taught us that pelvic adhesions are extremely rare in these cases. Barnes concisely states "the possibility of adhesions opposing reduction may be practically disregarded if gradual elastic pressure be employed (in the reduction)."

The "stage of involution after confinement" does not counter-indicate reduction by this method, although attempts at replacement by the other more forcible and rougher methods, during this condition of the parts, are certainly dangerous. In our case reposition was accomplished with perfect ease and success four weeks after confinement. It was not done when I first saw the patient (two weeks previous) because of the want of a suitable instrument. It was not convenient for me to attend to the case during the interval. During this time the placental site, which, in this case, being the lowest portion, received the pressure, had become, in appearance, like the rest of the mucous membrane of the womb, but the patient had had two attacks of flooding, and, moreover, had developed a mild case of "milk legs" with febrile action. Her condition had not improved; she had not gained strength. I doubt, if in another case and provided with a stem-repositor capped by an elastic cushion, such as my inflated Gariel Pessary made, I should fear to bring the steady slight pressure to bear upon even a recent "placental site."

EMBOLISM OF LEFT MIDDLE CEREBRAL ARTERY WITH APHASIA AND AGRAPHIA.[1]

BY G. H. LYMAN, M. D.

IN December, 1871, and March, 1874,[2] I reported two cases of this lesion causing aphasia, in which the diagnosis was confirmed by subsequent autopsies. Although the consensus of opinion as to the location of the organ of speech, or rather as to the part of the brain which governs the symbolization of ideas by words, is now pretty decidedly in favor of the views

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, February 14, 1883.
[2] Boston Medical and Surgical Journal, vols. lxxxvi. and xc.

of Hughlings Jackson, Broca, and others, every additional case must possess a greater or less degree of interest, and especially so where the recovery from the attendant hemiplegia leaves the patient persistently aphasic, unable to express his ideas, wishes, emotions, otherwise than by signs. The following case is of peculiar interest as an instance of ataxic and amnemonic aphasia persisting after perfect convalescence from the primary hemiplegia: —

P. R., aged twenty-four, single, a gardener, entered the City Hospital November 9, 1882, having been taken ill three weeks previously with pain, swelling of the joints, headache, and excessive dyspnœa. Was so far recovered in a fortnight as to be able to return to his work, but the pains recurred, with soreness at the epigastrium, vomiting, swelling of the face, slight cough, and excessive dyspnœa. He has now some pain in the shoulder, none in the chest. Urine acid, specific gravity 1015; no albumen. Dullness in right lower back with abundant crepitant râles on inspiration only. More or less fine moist râles elsewhere over both backs, and some sibilant and fine moist râles in each mammary region. Heart's action slightly intermittent. Pulse soft and easily compressible. The cardiac dullness extends to the right border of the sternum. Apex beat at sixth interspace and one inch to right of nipple. A soft systolic souffle at the apex, and the second sound indistinct; no anasarca. Abdomen distended with flatus.

November 12th. The pulmonary symptoms are much improved, slight dullness, and a few moist râles only remaining. Temperature and pulse normal.

Three days later, on the 15th, he was seized suddenly in the afternoon with a severe colicky pain in the epigastrium, which continued for some time and resulted in partial collapse, pulse slowed, feet cold, and some cyanosis about face and hands. There was no disturbance of the respiration. The following day there was found a loud systolic souffle below the nipple, extending laterally to the right for three inches. The second sounds were distinct and clear, and the impulse marked.

November 22d. There is now no pain over the cardiac area. At the third interspace both sounds are accentuated.

On the 4th of December he had a second attack, more severe than that of November 15th. The heart's action was strong, though the pulse was weak; he had pain in the right side of the head, with sharp pain and buzzing in the right ear. The pupils were normal. Vomiting ensued, followed by a comatose condition, the recovery from which, in a few hours, revealed a right hemiplegia, with face drawn to the left, and complete aphasia. The next day at the visit I found that he had been crying. He apparently understood what was said, but was wholly unable to speak, and was much depressed. The pupils were slightly dilated, but sensitive to the light. Temperature subnormal.

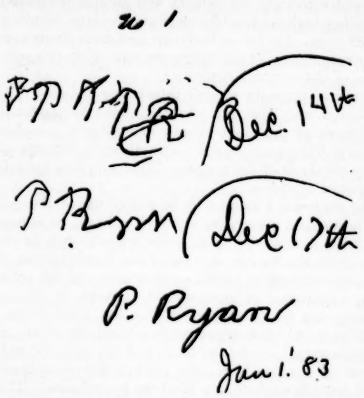
On the 6th had recovered some motion in his arm.

On the 9th could move the right leg a little. Complains of pain behind the ears and in the right arm and wrist when they are moved. The temperature of the two hands is alike, but there is a marked difference in the radial pulses, the right being almost imperceptible. He said "yes, sir" once quite distinctly, but could not repeat it, and has never since been able to articulate any syllable.

On the 13th the movements of the fingers and hand much improved. Tries hard to talk, but cannot articulate, the effort resulting only in a rapid ta-ta-ta-ta.

December 14th. He can to-day hold his pen and trace a few letters of his name very imperfectly, and on the 17th could do this much better (see specimens appended, Nos. 1 and 2). It should be noted here that there has never been any paralysis of his tongue. He has always been able to protrude it fully, move it to either side, or up and down, in a perfectly normal way.

On the 19th and 22d he had slight recurrences of epigastric pain, with nausea and vomiting and coolness



of the extremities, but without cyanosis or any loss of consciousness.

January 1, 1883. To-day his general condition is much improved. The right brachial and radial are still weaker than the left. He writes with more facility, and much better (No. 3), but there is no change in the aphasia.

January 18th. Has continued to improve in health and strength. Has been able for ten days to sit up and walk about. Either hearing or intelligence is somewhat imperfect, for when told to make any particular movement, such as raising his hand or leg, touching his ear or head, the request must be repeated distinctly several times before he can interpret its meaning. There still remains slight loss of power in flexors of right thumb and fingers, but not enough to prevent the holding of a pen or other small object.

January 26th. Has gained in flesh and strength; walks freely about the ward; makes signs for water, milk, watch, or anything he needs, with the repetitions of "ta-ta" in his efforts to talk; touches his mouth, nose, ears, or eyes correctly when told to do so; evidently understands what is said, and associates words with ideas, but how far his mental processes enable him to associate his own ideas with words, which he cannot utter, is a matter of conjecture, for although he is unable as yet to pick out the proper letters (from blocks) to make up a word, cases have been reported in which, after a certain lapse of time, the aphasia has disappeared, and the patient has shown that, notwithstanding his inability to utter them, his ideas have been, during the interval, mentally clothed in words.

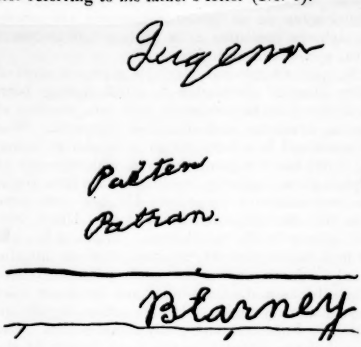
To summarize this case, we have first an attack of acute rheumatism followed, during an early convalescence, by a cardiac complication, probably endocarditis,

which at the end of a week or more (there being no means of ascertaining how long before his entrance the valvular murmurs had existed) culminated in severe epigastric pain and interference with the normal action of the heart, as shown by cold extremities, cyanosis, and collapse. From this unconsciousness he soon rallied, but as he had neither paralysis nor antecedent history of cerebral disturbance the cause seemed attributable to the local cardiac disease alone, until nearly three weeks later (December 4th) a more severe and convulsive seizure occurred, from which he emerged with right hemiplegia and complete aphasia, indicating with reasonable certainty the true nature of the affection. On two subsequent occasions there were slight recurrences of the epigastric pain without aggravation of the cerebral symptoms.

The case presents several interesting points. The rapid, and with the exception of slight weakness in the flexors of the right thumb and fingers, complete recovery from hemiplegia. The absence throughout of any paralysis of the tongue. The complete aphasia and partial agraphia.

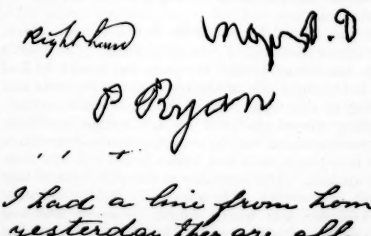
The diagnosis I assume to be embolism of the left middle cerebral artery, for although aphasia, as is now well known, may be due to other lesions, such as obstruction in the basilar artery and the resulting loss of nutrition to the pons varolii,— obstruction of left carotid by aneurismal enlargements, by tumors or disease affecting the posterior part of the left third frontal convolution, which is supposed to control the power of articulate speech,— yet the history of the case, the suddenness of the attack without premonitory symptoms, would seem to exclude any of these hypotheses. The only reasonable doubt, as it seems to me, would be in the bare possibility of hæmorrhagic effusion, but of this there is no evidence, while that of detachment of a fibrinous mass from the cardiac valves is very strong.

The aphasia is unmistakably ataxic, and in all probability amnemonic. When shown his name, Pat Ryan, on the bed card, he writes, as is seen in the accompanying specimens, Byan. He insisted, on his attention being called to the difference, that he was right, and with some excitement indicated by signs to the ward-master that he wanted something from his trousers, in the pocket of which was a letter from his father signed distinctly Ryan. He yielded, and reluctantly wrote the letter with the proper curve (No. 3). When told to touch the various parts of his head, nose, ears, eyes, chin, etc., he did so, and correctly, but only after the request was repeated distinctly several times. With a set of ivory block letters he was, after earnest and repeated efforts, unable to arrange his name. He would pick them over and over, and then begin, perhaps, with B, not P, the remaining letters being all wrong, but when spelt for him he readily recognized his error. When told to write any word other than his name he was utterly unable to do so, making only a series of unintelligible letters (No. 4). Though he is evidently intelligent, and able to indicate all his wants by appropriate signs, walking freely about the ward, and laughing heartily at any ridiculous occurrence, the question of the degree of impairment of his memory for words must remain doubtful while the ataxia persists; should that eventually disappear, as in some reported cases it has done, his memory of and ability to use words in their proper significance can be tested. Within a few days, January 27th, when asked to write his name he wrote Patran (No. 5). When his card was shown and then taken from him, he, with some hesitation, wrote it correctly. Otherwise from memory alone he never got beyond a series of unmeaning letters. February 2d, when asked where he was born, could not remember, and wrote it only after referring to his father's letter (No. 6).



With regard to the agraphia the above history shows that it was decidedly amnemonic, and not ataxic, for, as we have seen, he could only write a word if shown a copy, except occasionally his own name, and even that was not wholly correct. All the earlier tests were confined to his name, and this he had tried so often as apparently to have partially retained it in memory.

In a late number of the Boston Medical and Surgical Journal, December 28, 1882, attention is called to another phenomenon supposed to be connected with these cases of agraphia, the "*écriture en miroir*," so called. So far as this one case goes, it is confirmatory of M. Durand's opinion that this mirrored writing is not pathognomonic of the lesions producing aphasia, for, as shown by very many trials, this patient wrote from left to right and the reverse indifferently, sometimes one way, and sometimes the other. Only once, January



25th (No. 7), did he spontaneously begin from right to left, and with inverted letters, requiring examination by reflection in a small mirror. A letter written by him before his illness shows that he was well educated for his position in life. It was exceptionally well expressed, and the grammar and orthography faultless. A specimen of the writing (No. 8) is appended for comparison.

MULTIPLE CONTRACTURES OF THE SMALL AND THE LARGE INTESTINE FOLLOWING ENTERITIS.[1]

C. ELLERY STEDMAN, M. D.

—— ——, a single man, thirty-two years old, a native of Greece, once a sailor but afterwards keeper of a fruit stand, was admitted to the City Hospital March 9, 1881, with dysentery. He was treated successively with copper and opium pills, turpentine, enemata of laudanum and of silver nitrate, and catechu; and was discharged well in two weeks.

He was readmitted October 16, 1882, complaining of paroxysmal and cramp-like abdominal pain for a month past. Two weeks before entrance he gave up work and went to bed. He complained also of abdominal tenderness, more marked on the right side. He had vomited the day before. Had anorexia, nausea, constipation, progressive loss of flesh and strength. His feet and legs had been swollen for two months. Micturition was occasionally painful. He had had no chill. No other symptoms. Family history unknown. No venereal history. Temperature 100° F., pulse 84, feeble. On arrival at the hospital he was in considerable pain, relieved by a subcutaneous injection of morphia.

Upon examination the next day the heart and lungs appeared normal, as they did upon subsequent examinations, but he was not able to take a satisfactory inspiration after the first few days. The liver and spleen were normal upon percussion and palpation. There was no swelling, tympanites, or other abnormal appearance of the abdomen, though two or three days later there was a temporary tympanites. The fæces and general condition were those of one who had been long ill. There was an appearance as of jaundice of the skin and conjunctivæ, but his complexion was naturally swarthy. He still complained of severe abdominal pain. That morning he had a dejection, the first for five days, consisting of about a gill of slate-colored fæces. The next day he vomited two pints of yellow, stercoraceous matter, and had two larger, loose, slate-colored dejections. The next day there was less jaundice, but the face appeared ghastly.

From that time until death, which occurred November 22d, thirty-seven days after entrance, the history was one of gradual failure. Vomiting continued, but consisted only of the ingesta and bile. The diet was at first arranged to meet this indication, but later he was given whatever his slight and fickle appetite craved, including various forms of alcohol. An attempt was made to support him by nutritive enemata, but these were not retained. From the ninth to the nineteenth day after entrance he had on an average four dejections a day, sometimes slate-colored, sometimes yellow, sometimes brown; once partly formed; usually after enemata, but now and then spontaneous. From that time until the twenty-sixth day he averaged nearly one a day. Then followed six days without any, and he had one on each of the two days before the last. Two weeks after entrance he began to have pain in his throat, caused by follicular pharyngitis, after which he could speak only in whispers. The temperature rose to 101° F. the day after entrance, fell below normal in two days, and remained subnormal most of the time, until the sixth day before death when it reached 101.5° F., falling gradually afterwards till it became normal. The last rise of temperature was coincident with the development of a cough. The pulse was below 100 except at the time when the cough appeared. The chest was examined at this time, when there was no dullness, and the respiration was too shallow for purposes of auscultation. Nothing new was ever noted in the abdomen, except that the peristaltic movements of the bowels could be plainly seen beneath the emaciated abdominal walls. The urine was several times examined with negative results. After the first three weeks he appeared to suffer little or no pain. He slept very little, took less and less nourishment, and was reduced at the last to little but skin and bones.

The autopsy, by Dr. W. W. Gannett, eight hours after death, showed an old adhesive pleuritis, a recent fibrinous pleuritis, recent lobular pneumonia, purulent bronchitis and bronchiolitis, acute hyperplasia of the spleen, and catarrhal laryngitis, besides the following conditions in the abdomen: At a point 34 cm. above the cæcum was a constriction 3 cm. long, admitting a lead pencil. Upon slitting this open, the intestine, when laid flat, was found to measure 2.5 cm. transversely. Above the constriction was a dilatation of the intestine, which measured 11 cm. transversely. The mucous membrane was much reddened, and there was a considerable erosion. At a point 16 cm. above the cæcum were two ulcerations of the mucous membrane of the ileum, each 2 cm. square. At the cæcal opening there was a constriction with aperture large enough to admit the tip of the little finger; two, respectively, 2 cm. and 8 cm. below this, each large enough to admit a lead pencil; and, 4 cm. below the latter, one large enough to admit only a slate pencil, the intestine measuring at this point a little less than 2 cm. transversely. At each of the strictures mentioned there was considerable increase in muscular tissue, the mucous membrane, however, being apparently intact. The mucous membrane of the intestine in general was reddened and injected. The mesenteric and retroperitoneal lymph glands were considerably enlarged, presenting on section a translucent, grayish-yellow appearance.

[1] Read before the Boston Society for Medical Observation, January 1, 1883.

ENAMEL FILLINGS FOR TEETH.

BY WILLIAM HERBERT ROLLINS.

WHEN the article of which the following is an abstract was read before the Society for the Advancement of Oral Science, June, 1880, I supposed that the use of enamel filling was original, and the article was consequently sent to one of the journals. Since then several dentists have told me they had used pieces of porcelain for filling "twenty years ago." I am convinced there must have been some imperfections in the methods they used, as I am not aware of any one even now who regularly employs this way of filling teeth, and think it may be well to again attempt to make the method public, particularly as the experience of several years has convinced me that many conspicuous cavities can be more satisfactorily filled in this than in any other way. Early experiments were made with walrus ivory, and afterward with celluloid. The former succeeded, the latter failed. The next method tried was one which in some of its modifications is now used.

Carefully cut the cavity with perpendicular walls. When perfectly dry cover with a thin layer of some

petroleum fat. Roll up Godiva modeling composition into sticks about two inches long and one quarter of an inch in diameter. Hold the end of one of these sticks over the gas flame, then press into the cavity as far as possible. The cold part of the stick acts as a piston and gives a good impression. Attach a copper wire to the stick, dip for a moment into ether, then into powdered black lead, and brush to remove the excess. Make an electrotype from it. The thickness of the copper deposit should vary according to the subsequent treatment of the mould.

First method: Make the copper one sixteenth of an inch thick. Clean the surface and drill a hole through the mould. Cover the face of the mould with a layer of No. 30 gold-foil. Then make an enamel as follows: —

Oxide of lead	800 parts
Silica	400
Carbonate of potash	100
Cryolite	500

These should be finely divided, intimately mixed, melted in a covered white crucible, poured into cold water, dried, ground fine, and marked Enamel Base. Many bases have been tried, but this is now used. To color the enamel base: for gray, blue, platinum; for yellow, silver, chloride of silver, oxide of uranium, silver and gold, oxide of cerium, oxide of cerium of gold, glass of antimony either alone or mixed with gold. For blue, cobalt or oxide of silver.

Other colors have been tried, but these give good results with the enamel base mentioned. The amount of color must be found by experiment, each new sample differing in power.

Examples, gray-blue enamel: —

Enamel base, 100 grammes; platinum, 50 milligrammes.

Yellow enamel, No. 1.

Enamel base, 100 grammes; uranium oxide, 40 milligrammes.

Yellow enamel, No. 2.

Enamel base, 100 grammes; cerium oxide, 500 milligrammes; gold, a variable quantity; kaolin, 1 gramme.

These materials should be finely divided, intimately mixed, and fritted on platinum in a muffle. Colored enamels may be made less transparent by increasing the cryolite, by cooling slowly, or by adding an opaque body. Cryolite can be increased to advantage with those pigments only which give the required colors in the metallic state.

To mould the enamel: Put a piece on the prepared mould and lay them in a heated muffle. With a platinum instrument press the enamel into the cavity. Immediately remove from the muffle placing upon cold metal; when cold push out the enamel by means of the hole in the back; put the enamel in aqua regia; wash and dry.

Second method: Deposit copper in a thin layer and back it up as in an electrotype. Clean the mould and drill a hole through the back. Pack tooth body of a suitable color into the mould. Dry and push out of the mould by means of the hole in the back. Biscuit, and when cool replace in mould, trim and enamel, then bake. For small cavities the shrinkage is not injurious. For larger cavities one of several ways may be used. First way: Grind a piece of body to a size smaller than the cavity. Place soft tooth body in the mould and press the piece of fused body into it. Dry, biscuit, etc., as before. Second way: Pack soft body into the mould, dry it and bake; then use this piece instead of grinding as just described. If a cavity is circular and quite small, the most rapid way is to grind a piece of fused body to fit the mould.

By whatever method the emanel is prepared, success in filling depends upon the way by which the enamel is fastened into the tooth. I have found no durable cement, but a modification of the preparation called Hill's stopping seems to answer the purpose.

℞ Pure gutta-percha	1 part
White oxide of zinc	4 parts
Oxide of titanium { " " uranium }	a minute quantity

Mix.

To properly imbed the enamel in this preparation in filling it is necessary to use an instrument giving out a constant amount of heat, as otherwise one of two things will happen; either the enamel will be fractured by the changes of temperature or it will not be properly imbedded, because heat enough has not been used to soften the composition. I have devised several instruments, and two of them having been found simple will be described at the end of this paper.

Given such an instrument, begin the filling by drying the cavity with absolute alcohol, then soak it in creosote, dry the cavity again and varnish with a solution of copal in ether. Smear the surfaces of enamel and cavity with the oxide of zinc composition already given, place the enamel in position, and imbed it with either of the instruments to be described. After removing the superfluous material the operation is completed.

Instruments: The first is a copper wire one eighth of an inch in diameter and eight inches long. One end is expanded into the shape of the bowl of a teaspoon, the other is formed into a socket for holding instruments made of copper. Between these ends the wire is wrapped in asbestos and inclosed in a hard rubber handle, to one end of which is attached a small gas-burner so placed that when lighted the flame shall impinge on the concave side of the spoon-shaped end of the copper wire. The gas-burner is connected with the gas supply by a small rubber tube six feet long.

The other instrument is a pair of pincers. To the inside of one of the jaws is attached a soft rubber pad. The other jaw is perforated for holding an instrument like the first one, only on a smaller scale. The soft rubber pad is placed against the tooth, the warm instrument in the other jaw is then pressed against the enamel, and the jaws brought together by pressure on the handles.

REPORT ON SURGERY OF THE JOINTS AND OF DEFORMITIES.

E. H. BRADFORD, M. D.

IGNIPUNCTURE IN JOINT AFFECTIONS.

THIS method of cauterization is recommended by Kolomnin, of St. Petersburg, who claims that the procedure is indicated in all cases of granular inflammation of the knee, ankle, elbow, shoulder, and wrist joints during the period of bony growth in which there is enlargement and tenderness of the epiphyses, and also in coxitis femoralis (that is, where the disease originates at the femoral epiphysis). Ignipuncture is the best method in osteitis of the foot and wrist in children, and in tuberculous osteitis, and in tuberculosis of the medullary cavity of the diaphysis. The

best results are to be obtained in cases where there is pain in movement and tenderness of the articular ends of the bones; in cases of chronic synovitis with absence of pain and tenderness the results of this treatment are not so favorable.

An anæsthetic should always be used. Paquelin's thermo-cautery is the most convenient instrument, and the strictest possible antiseptic precautions are essential to success as well as to the safety of the patients. The operation may be performed either as (1) superficial punctures, burning more or less deeply the infiltrated soft tissues around the joint; (2) cauterization to the bone and the superficial surface of the latter; (3) cauterization of the integument, infiltrated tissues, cortical substance of the bone, and a part of the spongy tissue; (4) cauterization of the marrow and epiphysis after trephining the compact tissue of the epiphysis. In the first two varieties the author makes as many as from five to twenty punctures, and in the third from one to three, and in the case of the knee as many as ten. The joint and the whole extremity operated on should be covered with a thin layer of carbolized or salicylic wadding, and fixed by means of a plaster-of-Paris bandage.

In the majority of cases the dressings were changed three times, and by the end of a month the punctures were usually found healed. The results of the procedure to be expected are (1) a diminution of the infiltration; (2) some diminution in the size of the bones affected by osteitis; (3) a cessation of the pain caused by pressure on the periosteum; (4) disappearance of pain in all active and passive movements. The success following ignipuncture has lead the writer to consider it of greater use in many cases than the actual cautery, extension, or immobilization.

ÆTIOLOGY OF CLUB-FOOT.

In a careful paper on this subject Berg[1] brings forward a new theory as to the cause of the deformity, or, rather, a theory which, though suggested before, has never been urged, supported by facts. Under Berg's view the distortion is analogous to hare-lip, spina bifida, congenital hernia, etc., being due "to an obstruction in the normal development of the feet during some period of intra-uterine life." The recent advances in embryological research have given this theory as additional support facts not known before. Talipes equino varus has been hitherto explained as resulting from (1) a mechanical force acting upon the fœtus in utero, or (2) as the result of disease (intra-uterine), either osseous, muscular, or nervous. There are many facts which militate against the first of these theories, notably the one that other parts which would be subjected to the same pressure (if it existed) are never deformed. Permanently flexed knees, which should be frequent under this view, are, on the contrary, extremely rare. Little can be said in favor of the second explanation of club-foot, and against it very strong evidence can be brought forward that the healthiest of babies may have club-feet, and the structures are histologically perfectly normal.

It is now a well-established fact that in early fœtal life, sixth to seventh week, the sole of the foot is turned in. The normal rotation takes place gradually, and is mainly accomplished by the fourth month, but is not completed until the sixth month. This rotation is not due to muscular power, as it occurs at a time when there are no muscles, but according to Kölliker it is due to the process of growth of the parts. This position of the sole is due to the position of the limbs of the fœtus at an early stage of its existence, the thighs being rotated outwards, so that the inner surface of the thigh and the tibial border of the leg are pressed against the abdomen, the legs crossing each other at their middle, and the limbs being bent at the knees. Uterine pressure with the limb in this position necessarily confirms a position of equino varus. But in the growth of the fœtus the lower extremities alter their position, the thighs are drawn inwards and rotated so that the anterior surface instead of the inner surface lies next the abdomen, and the soles instead of the outer surfaces of the feet are presented against the uterine walls.

The arguments in favor of Berg's view are summed as follows: —

(1.) The fact that the leg is rotated outward at birth in all cases born with the deformity.

(2.) During embryonic life a similar deformity is present as long as the leg has not yet completed its inward rotation.

LATERAL CURVATURE.

Mayer has examined 336 girls of the ages between six and thirteen with reference to the existence of lateral curvature, and found that the frequency of curvature of the line of the spinous processes increased in each succeeding school year, as well as the extent of the deviation. The seat of the greatest degree of curve was in sixteen per cent. of the cases in the upper half of the thoracic region (that is, as far as the seventh dorsal vertebra); in fifty-one per cent. from the seventh to the eleventh dorsal; in thirty-three per cent. from the eleventh dorsal to the second lumbar vertebra. A commonly received opinion is current to the effect that in children between six and seven a physiological curve, with convexity to the right, is frequent in the upper thoracic region; this "physiological" curve becoming exaggerated a pathological condition follows, and a secondary or compensatory curve in the lumbar region is established. This view Mayer, in view of his examinations, cannot accept, as he has not found the so-called "physiological" curve to exist, nor that the lateral deviation begins most frequently in the upper dorsal region, but in the lower dorsal or lumbar region. The so-called double lateral curvature first appeared later, the lower curve being regarded as the primary one. The writer concludes with a statement of his opinion that a one-sided position, common in writing, is undoubtedly a factor in the causation of lateral curvature.

Schmidt[2] is of the opinion that torsion of the vertebral column is primary, and the lateral deviation secondary in scoliosis. He thinks that a lateral curve does not necessarily cause rotation of the vertebræ, as is seen in the curves after pleuritic exudation. Further, it is difficult to explain the existence of rotation following a side curve of the column, but he claims to have demonstrated that a primary torsion of the vertebræ will give rise to the lateral curvature. "If a vertebral column freshly removed from a cadaver, the lower part of the column fixed, it will be seen that an artificial rotation of the different sections of the vertebral column will occasion a curvature to the side." This rotation of the vertebræ, the author thinks, is due

[1] Archives of Medicine, December, 1882.

[2] Vide Centralblatt für Chir., November 11, 1882.

to an unequal distribution of weight, although he admits that it may be due to an abnormal growth of the pelvis, ribs, or vertebra. Like Mayer and Klopsch he considers the ascending scoliosis (that is, commencing in the lumbar vertebra and involving the dorsal region secondarily) as much more frequent than a primary dorsal curve.

Treatment for confirmed curves should consist of fixed appliances, but for vertebral columns which are still flexible a systematic course of exercises, twisting the spine in a direction opposite to the curvature, is to be recommended. The child is to be held between the physician's knees, and pressure by the hands is to be employed in such directions as would correct the curve, the child then spreads its arms, and twists the body toward the convexity of the curve, keeping the body for some time in this position. Extension can be used in severe cases.

OSTEOTOMY AND TARSOTOMY.

J. Guerin [1] records himself as an earnest opponent to the operations of resection of the tarsus in club-foot, although he admits that in adults, in rare cases, the procedure may be justifiable; in children the desired result can always be obtained by strictly orthopædic measures, including tenotomy. This view is also held by Gosselin and Blot, the latter also rejecting osteotomy in rachitic curves. These opinions fairly represent the opinion of the majority of French surgeons, which is opposed by Tillaux, who calls attention to the lack of danger in these procedures as at present performed.

TREATMENT OF LATERAL CURVATURE.

Noble Smith,[2] in speaking of the treatment of lateral curvature, records himself as not in favor of the perforated felt jacket.

"(1.) Because felt jackets compress the walls of the thorax, and thus interfere with respiration.

"(2.) Because felt jackets do not thoroughly control the upper part of the spine.

"(3.) Because the use of such corsets hinders the free development of the dorsal and other muscles.

"(4.) Because he finds it better, if a support is needed, to use a light instrument which does not interfere with muscular exertion, but which acts as a support directly the muscles become too tired to keep the spine in an upright position, and which prevents the subsidence of the spine into abnormal curves."

Muscular exercises in such cases should be directed not only to strengthen the weak muscles, but to act directly on the curves, and for that purpose he advises the following: the patient should sit upon a stool so arranged that the pelvis cannot twist, and weights attached to a cord and running over a pulley should be pulled toward the body, the weight for the right arm being in front, and the one for the left arm behind the patient. The *rationale* of this treatment is to untwist the curve of the rotated vertebræ. Although this plan of exercises acts only on the dorsal curve, yet the resistance of the pelvis to the action of the arms tends to "twist the lumbar part of the spine in the opposite direction, and this produces the action that is wanted."

[1] Vide Bull. de l'Acad. de Méd., 1882, No. 37.

[2] British Medical Journal, March 10, 1883, page 455, and Lancet, January 27, 1883.

CARIES AND NECROSIS. STATISTICS OF ONE HUNDRED AND TWENTY-EIGHT OPERATIONS.

Merkel,[3] of Nuremberg, has published the results of his experience in the last eighteen years of operations for non-traumatic caries and necrosis. The best results were obtained from resection of the upper extremity, gaining in all cases of resection of the shoulder a movable joint, and a useful limb in elbow resections (in some of the cases a stiff joint and in none a loose joint). In operations of the carpus and finger-joints motion of the finger and wrist was gained. The later results in resection of the hip and knee showed a moderate amount of shortening, and in the knee a stiff joint at a slight angle. In the ankle, in two cases, motion was gained. The percentages of recovery were as follows: shoulder, one hundred per cent.; elbow, seventy-seven per cent.; wrist and hand, ninety-two per cent.; knee, seventy-five per cent.; tibio-tarsal joint, fifty-seven per cent.; hip-joint, sixty per cent. In three per cent. of all the operations relapses occurred, causing death or requiring amputation. Amputation was needed in six per cent. of the operations on the upper extremity, and in fifteen per cent. of the lower extremity. Seven per cent. of all the operations died, only one death being from septic poisoning. Antiseptic precautions were used.

ANCHYLOSING ARTHRITIS.

Nicaise reports the result of his investigations on "arthrite plastique ankylosante," as Gosselin has termed the morbid process following blennorrhœa in most cases, sometimes after confinement, and terminating in the formation of an anchylosis. The affection sometimes affects several joints at first, but becomes finally limited to one; there is usually no effusion.

Nicaise has collected thirteen cases: ten of his own, two of Gosselin, and one of Duplay; nine were women, five men: the patients were between the ages of sixteen and thirty. The joints affected, the knee in eight, the elbow in three, and the shoulder and hip in one each. The course of the affection was acute or subacute. Ollier has given the name of arthritis sicca acuta to the disease, or arthritis acuta pseudomembranosa, and with Gosselin believes the pathological changes to be the result of a fibrinous exudation between the ends of the bones forming the joint and a subsequent organization and fibrinous adhesions. Duplay, in a case of resection, found this to be the case. The destruction of the cartilage was slight; but there was swelling of the ligaments of the joint and the periarticular tissue. Although the prognosis as to the patient's general condition is good, and there is no tendency to suppuration, yet the joint very rarely recovers its normal condition, and there is a great tendency to the formation of a stiff joint. The treatment in the first stage should be at first antiphlogistic and fixation of the joint in a rectified position, with salicylate of soda internally. If effusion is present, antiseptic puncture. In the second stage, that is, after the cessation of the inflammatory symptoms, treatment is usually powerless, passive motion is not borne, and *brisement forcé* may lead to complications.

Volkmann [4] mentions a somewhat similar affection occurring in the knee, without a liquid effusion, but with a swelling due to a substance like gelatine. The

[3] Centralblatt f. Chir., No. 51, December 23, 1882.

[4] Centralblatt f. Chir., November 11, 1882.

joint was incised freely, and the jelly-like substance pressed out. The synovial membrane was found injected and dry. A cure with a stiff joint followed.

RESECTION OF THE WRIST-JOINT.

Bidder[1] writes, after investigating a number of cases, that the normal power of the hand can never be restored after a resection in an adult. The best result is either anchylosis or limited motion, and therefore as much bone as possible should be saved. Other things being equal a loose joint entails less power in the hand and fingers. He has collected a number of cases which were observed from one to two years after the operation. A most remarkable one is that of Langenbeck, the patient being able to write and to work at his trade, using his hand nearly as well as before the operation. The case was examined six and a half years after the removal of the carpal bones and a part of the radius. The history of eleven other patients is also given, showing more or less satisfactory results.

The majority of joints for which resection is performed are "tuberculous," as they are now termed; these are in some respects more and in other less likely to do well after resection than joints with disease following gun-shot injuries, for the reason that antiseptic precautions are more thoroughly carried out in pathological than in traumatic surgery, though on the other the constitutional condition of the patients in "tumor albus" is not favorable to a good recovery.

The experience in our civil war was not very brilliant as regards the results from resection of the wrist. Out of ninety-six cases fifty-one recovered with stiff joints, three dangling joints, five with mobility, eight deformity.

Sixteen cases of resection of the wrist in the Franco-German war eight had moderately useful hands, the rest useless.

Antiseptics are of course beneficial in the after-treatment of these cases. The writer prefers light pasteboard or tin splints to plaster of Paris, but as soon as possible the stiff bandage should be removed and a loose silicate worn. Massage and passive motion should not be neglected.

Bidder's results coincide in the main with the experience of Dr. J. C. Warren in seven cases.[2]

According to Culbertson's tables,[3] however, the results in resection at the wrist-joint would appear to be rather more favorable than indicated by Bidder. In the table of excisions of the wrist for disease 7.59 per 100 secured "perfect" results, 45.57 per 100 "useful" limbs, 24.03 per 100 "worthless" limbs.

The average period of recovery in thirty-five cases was nearly two and a half years.

STATISTICS OF RESECTIONS.

Angerer[4] gives the following figures as the results of sixty-three resections (eighteen of the knee, seventeen of the hip, elbow sixteen, wrist seven, ankle three, shoulder two): twelve subsequently underwent amputation, fourteen died (ten of tuberculosis, one amyloid degeneration, one ulcerative endocarditis, one carbolic-acid poisoning, one tetanus), twenty-four recovered with useful limbs. Of the sixty-three cases fifty-eight were for chronic fungous disease of the joint. The dressing after the operation was gauze prepared with corrosive sublimate. The cases treated with iodoform appeared to do well, but the writer was unable to say whether the length of the after-treatment was shortened or not by that dressing.

ANTISEPTIC ARTHROTOMY.

Boeckel[5] speaks in enthusiastic terms of the results of incision of the joints under antiseptic precautions. In chronic hydarthroses his treatment is to puncture and wash out with a mild aseptic solution. In case a cure is not gained in this way he advises incision and drainage. A number of cases lead him to the belief that in a fungous process of the joint the granulations disappear after incision and curetting, and in some cases even a movable joint may be gained. Healthy joints are to be opened to remove loose bodies, or in cases of old dislocations. In ganglions or synovial articular cysts he incises, ties the pedicles, and removes the sac. No evil results follow opening the tendinous sheath. Where the joint has already been opened before treatment energetic disinfection with chloride of zinc or carbolic acid is to be carried out, followed by a frequent dressing with the usual antiseptic precautions. Success in all these cases is only to be won by careful antiseptic dressings.

ARTIFICIAL ANCHYLOSIS IN INFANTILE PARALYSIS.

Albert, in 1881, reported a case of infantile paralysis on which he had performed resection of the knee for the purpose of obtaining an anchylosis, and thus giving a useful limb independent of appliances. Three similar cases are now reported.[6] The ages were twenty-two, thirteen, ten months. Anchylosis was established in a few months, and the result said to be satisfactory, although two of the three needed an appliance to retain the foot, the leg muscles being also paralyzed. In a fourth case (a child eleven years old, the thigh muscles were normal, but the foot was useless, in the position of equino varus) the ankle-joint was opened and the cartilaginous surface of the astragalus and tibia removed, with the result of a useful limb.

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[1] Archiv f. klin. Chir., 1883, 28th Bd., iv., p. 822.
[2] Boston Medical and Surgical Journal, October 26, 1882, page 388.
[3] Transactions American Medical Association, 1876. Supplement to vol. xxvii.
[4] Centralblatt f. Chir., No. 44, 1882.
[5] Gaz. Med. de Strasbourg, Nos. 4 and 5, 1882.
[6] Centralblatt f. Chirurgie, page 694, October 21, 1882.

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New Instruments.

TRACHEOTOMY. A NEW DILATOR.

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THE operation of tracheotomy is by no means a simple operation, and its performance is probably more dreaded by surgeons than that of any other. Numerous instruments have from time to time been invented for the purpose of making its performance more easy; but of these very few are in general use, nor can it be said that any of them are indispensable, as any competent surgeon could if called upon suddenly perform the operation with the instruments found in the ordinary pocket-case, improvising a tube by bending up a probe or a piece of wire, or dispensing with the tube entirely and stitching the cut edges of skin and trachea together. If, however, the surgeon has sufficient time to select his instruments according to the peculiarities of the case, it is then that some of the special instruments will be found of great assistance.

For convenience the operation of tracheotomy may be divided into three parts: (1) to expose the trachea; (2) to open the trachea; (3) to insert the tube.

The instruments necessary for (1) are knife, forceps, and director; for (2) a tenaculum, or a pair of small hooks and knife *par excellence*, or, in case the rings of the trachea are ossified, scissors, small saw, or bone forceps may be necessary; for (3) dilator and tracheotomy tube.

Of the numerous instruments that have been invented for this operation the greater part of them are either tracheotomes or dilators. There can be no doubt of the superiority of the knife over any tracheotome, and in the hands of the incompetent the latter may prove a dangerous instrument. As for the dilators they are not easy to insert, are liable to slip out, and take up so much room in the tracheal wound that it is difficult to insert the tube.

The accompanying cut represents an instrument de-



FIGURE 1.

vised by the writer, the peculiar feature of which is a tenaculum and dilator combined. The action is the same as in the Richardson dilator, the blades being bent at an angle instead of being parallel, so as to act as retractors of the soft parts, and each blade terminating in a hook. Figure 2 shows the position of the hooks when the blades are closed ready for use. The point of each hook being turned down aids in introducing. By pressing the points lightly against the trachea and opening the blades the hooks insert themselves firmly into the trachea, leaving space enough between them for the knife to pass. The instrument is now a tenaculum, by which the trachea can be lifted forward and held firmly before opening it, which is particularly to be desired when operating on children, where the trachea is situated deeply and often has a great range of up-and-down movement. To open the trachea the knife is inserted between the blades, and as the rings of the trachea are cut the instrument can now be used as a dilator, holding open the edges of the cut perfectly with no danger of slipping out.



FIG. 2.

The interior of the trachea can now be inspected, false membrane or any foreign substances removed, and hæmorrhage stopped previous to inserting the tube. As the blades of the dilator take up no room the tracheal opening need be made no larger than is absolutely necessary to admit the tube. The tube can be readily inserted, and the dilator quickly dislodged by merely closing the blades.

The advantages claimed for this instrument are: —

(1.) A tenaculum for elevating the trachea and controlling its movements.

(2.) A dilator, the operator never losing his hold on the first opening made into the trachea.

(3.) The blades of the dilator being hooks take up no space, and allow easy introduction of the tube through the smallest possible opening.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

C. M. JONES, SECRETARY.

JANUARY 1, 1883. DR. J. ORNE GREEN presided. DR. C. E. STEDMAN read the regular paper on

A CASE OF MULTIPLE CONTRACTURES OF THE SMALL AND THE LARGE INTESTINE FOLLOWING ENTERITIS.[1]

In answer to an inquiry from Dr. Jeffries, DR. STEDMAN said that at one time there was some tender-

[1] See page 391 of this number of the JOURNAL.

ness just over the beginning of the colon, but this did not continue long, and the rest of the abdomen was at no time unusually sensitive.

Dr. Gannett said that two of the strictures in this case were due solely to hypertrophy of the muscular tissue. There had been no cancerous growth. The ulcers which had been described were not located near the strictures, and over them the mucous membrane had already re-formed. As regards the possibility of the strictures being due to syphilis, there was no post-mortem evidence of this disease, and, moreover, strictures of specific origin are generally found lower down the bowel, and especially in the rectum. That the strictures were permeable during life was shown by the presence of the remains of food in the lower part of the intestine.

Dr. W. A. Dunn reported four cases of

EMPHYSEMA OCCURRING DURING LABOR.

Accidents of this kind bear within them the possibilities of serious importance. On the evening of December 19, 1881, I delivered a primipara who was about ending an ordinary labor when, during a violent effort to expel the placenta, her right face became swollen and presented to the touch a sensation of crepitation. The swelling seemed to commence on the lower part of the right inferior maxillary region and extended upwards on the nose and cheek until it reached the zygomatic region of the same side. It gradually extended to the neck, but there were no other symptoms. After some hours the swelling, which was puffy and movable, extended until the upper part of the chest and right arm were covered with a crepitating mass. There was neither cough, pain, nor dyspnœa. There was no modification of respiration, and although I was somewhat apprehensive as to what limitations the progressing air would find, I decided to do very little for the emphysema. With the exception of an opiate to lessen the liability to cough, the patient received no special medication for this symptom. On the two days following, the patient's condition had not become worse, the emphysema had advanced somewhat lower on the chest. The air remained in the subcutaneous cellular tissue for four days and gradually disappeared. I suppose that during a violent expulsive effort while the glottis was closed there was a rupture of a small portion of the trachea which allowed the entrance of air into the subcutaneous cellular tissue. In the records of the Lying-in Hospital is a case somewhat similar to my own, in which however the emphysema began on the upper part of the right chest under the clavicle and extended upwards as far as the zygomatic arch and downwards to the middle third of the chest, and also to the shoulder and upper part of the arm of the affected side. The emphysema disappeared after six days without special treatment. Two cases have occurred in the practice of Dr. John G. Blake and were fatal. In each case Dr. Blake was summoned by a midwife; the conditions were similar in both, and were probably the consequence of a ruptured uterus. The emphysema was almost complete over the abdomen, thorax, head, and arms, which were covered with large masses of crepitating tissue. I have not been able to find special reference to similar cases in the books which I have consulted.

Under aggravated circumstances it is possible to understand why an emphysema might become a complication of very serious importance. The rarity of these cases attest the importance of the inhibitory forces continually acting in our bodies, and exemplify the conservatism of nature's laws. In the second case to which I have referred an inter-lobular emphysema may have existed, which might have been caused by a laceration of air vesicles or of the bronchial tissue. This rupture usually gives rise to a similar condition of the pleura, and may extend to the subcutaneous tissue of the neck, thorax, and body generally. Jones and Sieveking say that a similar condition of the subcutaneous cellular tissue may arise from the laceration of the trachea. They say that these occurrences are comparatively rare, and not important. The question would arise concerning a cause for the facial emphysema other than a rupture of the tracheal tissues. In considering emphysema of the eyelids and orbit Dr. Baudry, of Lille, reaches the following conclusions in the *Receuil d' Ophthalmologie*, August, 1881:—

"The term spontaneous emphysema should be applied only to those rare cases in which the air in the nasal fossæ passes spontaneously into the areolæ of the orbit's palpebral cellular tissue, no effort at clearing the nose having been made. Emphysema in this location, which occurs after an effort at clearing the nose, or after sneezing, is the result, in most cases, of a fracture of one of the bones in the internal orbital wall, which permits the direct passage of air from the nasal fossæ into the cellular tissue of the eyelids and of the orbit. The emphysema will be limited to either the lids or the orbit, or may occupy both localities, according to the seat and extent of the fracture, and to the varying pressure of the expired air. Under exceptional circumstances the so-called spontaneous emphysema results from complete rupture of the lachrymonasal duct, produced by surgical traumatism. In this case osseous lesions may or may not be present. In still rarer cases the emphysema is attendant upon defective development of the parts in question."

In reply to a question by Dr. Otis, why the reader connected the phenomenon with the third stage of labor rather than the second, Dr. Dunn said that in this case the labor in the second stage had been very easy, almost without effort, but the expulsion of the placenta was attended with violent straining. Otherwise he would have ascribed the symptom to the second stage, and it may possibly have occurred at this time, though not appearing till later. His attention was first called to the swelling of the face by the patient herself, about half an hour after the expulsion of the placenta, while putting on the binder. He had delivered the woman again about a year later without any unusual symptom.

Dr. Otis said that in a case which had come under his observation the symptoms were not discovered till two hours after the labor was completed. It had in this case been ascribed to the expulsive efforts of the second stage, and it would be likely to require considerable time for the air to come as high as the zygomatic arch.

Dr. McCollom agreed with Dr. Otis on this point, and because of the time necessary for the passage of the air through the tissues as well as other considerations maintained that the probabilities pointed to its occurrence during the second rather than the third stage.

Dr. Draper asked if the lungs were sound and healthy; and also how such phenomenon could occur without pneumothorax.

DR. DUNN stated in reply that there was no affection of the lungs. He thought there might have been perhaps, a slight pneumothorax without its making any very marked manifestation. If, however, the glottis were closed during a straining effort a considerable quantity of air might pass through a rupture of a weak trachea into the subcutaneous cellular tissue, or a vesicle of the lungs might burst in such position as to let the air into the mediastinum, whence it would pass upward to the face. On either supposition pneumothorax would not occur.

ABDOMINAL ABSCESS.

DR. GANNETT exhibited a specimen coming from a case of abdominal abscess occurring in a patient of seventy. The symptoms had lasted six months, and were, in the main, gradually increasing pain in the right lumbar region, with progressive exhaustion.

Most abdominal abscesses, Dr. Gannett said, represent either a perimetritis, periproctitis, perityphlitis, or perinephritis, having their starting point in the organs named.

The special interest in the present case was in the fact that the abscess had not its origin in any of these organs, but from the gall-bladder. This contained several flattened and irregular calculi. Its fundus was adherent to the peritoneal wall, and showed on its inner surface at this point a partially closed cicatrix nearly an inch in length, with puckered borders.

This represented, evidently, the result of an ulceration, with perforation of the sac by a gall-stone, but so slowly had it occurred that opportunity was afforded for an adhesive inflammation of the fundus to the peritoneal wall.

In this way the calculus, instead of dropping into the peritoneal cavity, made its way between the peritonæum and muscles of the lateral abdominal wall, causing formation of an abscess, with extensive destruction of the muscles, reaching as high as the breast and below Poupart's ligament, and of a lateral area of about eight inches. At a point in the right lateral region, just below the lower border of the ribs the pus had "pointed," having here reached, in the process of destruction of the muscles, the subcutaneous connective tissue.

NEW YORK ACADEMY OF MEDICINE.

STATED MEETING, APRIL 19, 1883.

DR. GASPAR GRISWOLD read a

NOTE UPON CRYSTALLINE ELATERIN,

which, he said, had been found, after considerable experience, to be a thoroughly reliable article, and of uniform excellence, while most of the other preparations of elaterium (which was well known to be really one of the most efficient of hydragogue cathartics) were so unsatisfactory and variable in their action that the profession had to a great extent given up the use of the drug.

DR. W. GILL WYLIE then read a paper on

ANTEFLEXION OF THE UTERUS; ITS ÆTIOLOGY AND ASSOCIATED PATHOLOGICAL CONDITIONS,

which was discussed by DRS. T. A. EMMET, WILLIAM T. LUSK, and WILLIAM M. CHAMBERLAIN.

NONE BUT THOSE IN FAVOR OF THE NATIONAL CODE OF MEDICAL ETHICS TO BE ELECTED FELLOWS OF THE ACADEMY IN FUTURE.

After the discussion of the paper the following resolutions, proposed by DR. AUSTIN FLINT, JR., were adopted by the Academy: —

Whereas, The New York Academy of Medicine adopted in its By-Laws, as its standard of medical ethics, the Code of Ethics of the American Medical Association, and

Whereas, Each newly-elected member of the Academy is required to sign its Constitution and By-Laws, be it

Resolved, That the Committee on Admissions is hereby instructed to report to the Academy for election as resident Fellow no physician who is known to the Committee to be in opposition to the Code of the Academy, and who, as a consequence, cannot consistently sign the By-Laws of the Academy.

Resolved, That these instructions to the Committee on Admissions be continued in force until the American Medical Association shall have modified or repealed its Code of Ethics, or until the Academy shall have modified or repealed its By-Laws referring to medical ethics.

THE ACTION OF THE STATE MEDICAL SOCIETY CONDEMNED.

On motion of DR. AUSTIN FLINT, JR., the following resolution was also passed: —

Resolved, That the Academy hereby disavows any sympathy with the action of the State Medical Society, which has put the profession of the State, through its State and County Societies, in an attitude of opposition to the medical profession of the rest of the United States.

Recent Literature.

A Text-Book of Pathological Anatomy and Pathogenesis. By ERNST ZIEGLER, Professor of Pathological Anatomy in the University of Tübingen. Translated and Edited for English Students by DONALD MACALISTER, M. A., M. B. Part I. General Pathological Anatomy. London: Macmillan & Co. 1883.

Professor Ziegler's original work in the field of pathological anatomy is so well known that a text-book by him promises to be an addition to those already published. And this expectation is fulfilled in the present volume. Already it has reached a second edition in Germany, and the translation is from this.

This part, which is complete by itself, treats of general pathological anatomy, while those which are to follow will be devoted to the special changes in the different organs.

The general subject is divided into seven sections, the first treating of malformations, the second of anomalies in the distribution of the blood and lymph, the third of retrogressive disturbances of nutrition, the fourth of progressive or formative disturbances of nutrition, the fifth of inflammation and inflammatory growths, the sixth of tumors, and the seventh of parasites.

All the subjects are treated concisely and from the modern stand-point. References to the most impor-

tant authorities are given, so that a more detailed account can be easily looked up.

There is little to criticise and much to praise. It is to be wished, however, that more space had been devoted to the very important subject of thrombosis and embolism and their consequences, which are here reduced to their simplest terms.

Sections three and four, on retrogressive and formative changes, are especially valuable as placing in their proper relation to each other the different forms of necrosis and degeneration according to modern teaching.

Section seven is also well worked up, the essential points of structure of the different animal and vegetable parasites being clearly described and well illustrated, as well as an account of their mode of action upon the economy. The schizomycetes, or bacteria, receive particular attention for the importance in which they are held at present, and a good idea of the condition of the subject can be readily obtained.

Thanks are due to Dr. Macalister for the easy translation and the valuable additions, especially references to English literature.

The book is well published by Macmillan & Co., and is one that is to be recommended to all students and physicians.

The Pathology and Treatment of Diseases of the Ovaries. By LAWSON TAIT, F. R. C. S. Edin. and Eng. Fourth Edition. New York: William Wood & Co. 1883.

This book, the nucleus of which is the Hastings Essay for 1873, has grown with the author's enlarged experience, so that this fourth edition presents the reader with 350 pages of interesting matter. As would naturally be inferred from the accounts we have had from time to time of the work done by the author, this increase is principally in the line of abdominal and pelvic surgery. In reading the book we cannot help being charmed by the enthusiasm and impressed by the boldness of the writer, and were it not for certain doubts which will be referred to later, we should be tempted to feel that a new era had arrived in this department of surgery.

The contents of the book will best be indicated by giving a brief résumé of his operations, which will also show to what extent and in what directions he is enlarging the scope of abdominal surgery. In 101 consecutive ovariotomies he had but three deaths. He has had 45 cases of removal of the uterine appendages for myoma, with two deaths; 24 for hydrosalpinx, 20 for pyosalpinx, and two of removal of the ovary for abscess, with no deaths; and 65 operations for various abdominal tumors and diseases, principally nephrotomy (eight), hepatotomy for hydatids of the liver (10), laparotomy for pelvic abscess (20), for chronic peritonitis (eight), and for removal of extra-uterine pregnancy (seven), all with one exception successful.

A record of 257 serious operations of this character with but six deaths is certainly phenomenal. It is so phenomenal that we are the less surprised that in certain quarters doubt has been expressed as to the correctness of these results, and discrepancies between the statements here made and those contained in other communications previously published by the author are claimed to be found. Until such doubts are effectually silenced and the truth of these published statements verified it is wise to accept them with a certain amount of reserve. It is only fair to Lawson Tait, however, to say that when professional jealousies are strong as they are in England, especially at the present time, among this class of specialists, unfair judgments and criticisms are often too freely expressed.

It is not, however, the remarkable successes which he claims which are the important thing, so much as the light thrown on certain pathological conditions and the hope held out of being able to relieve them. For example, hydro- and pyosalpinx are by no means common affections, yet the author has operated on 44 such cases and removed the tubes. The thought suggests itself, Are not we at fault in our diagnosis, and may not many of those cases of chronic invalidism where we find what we call latent cellulitis or thickening of the broad ligament really be affections of the tubes?

Enough has been said to show that the book is one that will repay perusal, and though it is perhaps wise to read with caution and not to accept as proven all that is said, yet it is full of suggestions of practical value.

The way the publishers have done their part deserves a word of praise. The type and paper are excellent, and the binding is in good taste.

Tabulæ Anatomica Osteologiæ. Edita a CAROLO H. VON KLEIN, Artium Magistro, Medicinarum Doctore. Cincinnati, Ohio, U. S. A.: Cincinnati Lithographic Co. 1883.

This collection of plates is a curiosity, inasmuch as the preface is in Latin and the names of the parts in the same language. It is the author's desire to bring the book before physicians in all parts of the world, and he accordingly has chosen the old language of science. The plates that we have received represent the skeleton as a whole and many of the separate bones, as well as the teeth, which latter are shown in various stages of development. It is intended that the price should be moderate. The drawings are not free from criticism. Several crudities and inaccuracies could be shown, and in many cases the scale is too small. We are unwilling, however, to condemn honest work by too severe criticism. A cheap and good atlas of anatomy is a great desideratum; we cannot call these plates absolutely good, but they may serve to supply a want.

Handbook of Vertebrate Dissection. By G. H. NEWELL MARTIN, D. Sc., M. D., M. A., Professor in the Johns Hopkins University, and WILLIAM A. MOALE, M. D. Part II. How to Dissect a Bird. New York: Macmillan & Co. 1883.

We are extremely pleased with this little work, which fulfills thoroughly its promise. The rules for dissecting and studying the viscera and bones of the domestic pigeon are admirable. We could have wished that more attention had been given to the muscles, but such was not the plan of the author, and we recognize the advantage of keeping such a work within narrow limits.

— Prof. Paul Von Bruns, for forty years professor at the University of Tübingen, died on March 31st. As an author he distinguished himself by his Handbook of Practical Surgery, Laryngoscopy and Laryngoscopical Surgery, Galvano-Surgery, and other works.

Medical and Surgical Journal.

THURSDAY, APRIL 26, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY, No. 4 PARK STREET, BOSTON, MASS.

SIXTY-NINTH ANNUAL REPORT OF TRUSTEES OF THE MASSACHUSETTS GENERAL HOSPITAL AND McLEAN ASYLUM. 1882.

THE average number of patients in the hospital during the past year was 168 against 166 the year before. In the asylum 156 against 149 last year.

The treasurer's account shows for the year ending December 31, 1882, an excess of expenditure over income of $37,280.17, which has been charged to the General Fund. The average deficiency for the past two years has been $26,150.99. The subscriptions for free beds has fallen off $700.

The new Convalescent Home at Waverly was dedicated last May, since when it is reported to have been in constant use, and to have more than fulfilled the benefits that were anticipated from it. A new building exclusively for the use and accommodation of the nurses has been erected during the year on the hospital grounds at a cost of $35,000. This has been named the Thayer Building in memory of the late Nathaniel Thayer, who was a generous benefactor to the hospital. In this building each nurse is to have a room to herself, and a large general sitting-room is placed on the lower floor.

Every large hospital should have such a building for its nurses. No class in the community has more wearing duties to perform than hospital nurses, and if we expect good work from good workers these women should, at least when not at their posts, be afforded a certain comfort and privacy. It is money well invested, we are convinced, and we were sorry to see that the Boston City Hospital failed to obtain an appropriation from the city government for a similar object, although the hospital authorities are fully alive to its importance.

A new building for the "out-patient department" is to be put up with a sum of $25,000, left by a friend for a memorial of the late Dr. George H. Gay, formerly a surgeon to the hospital.

Dr. Samuel Cabot, a member of the Board of Visiting Surgeons since 1854, resigned last May, and Dr. John Homans was appointed to the vacancy; with this exception there have been no changes in the visiting staff.

The following figures are taken from the report of the resident physician, Dr. Whittemore: —

NUMBER OF PATIENTS IN THE HOSPITAL, JANUARY 1, 1882.

Paying	15
Free	140
Total	155

ADMITTED FROM JANUARY 1, 1882, TO JANUARY 1, 1883.

	Males.	Females.	Total.
Patients paying board	259	140	399
Patients paying board part of the time	7	5	12
Patients entirely free	1102	634	1736
	1368	779	2147

	Medical.	Surgical.
Males (boys, 149)	412	956
Females (girls, 62)	384	395
	796	1351

Of these, six paid $50 per week; eighteen paid $35; two paid $28; four paid $25; fifty-nine paid $21; one paid $15; two paid $14; five paid $12; 117 paid $10.50; three paid $10; two paid $8; 147 paid $7; two paid $6; twenty-three paid $5; eight paid $4; seven paid $3; one paid $2.50; three paid $2; one paid $1.50.

Whole number of patients treated during the year: paying, 414; paying a part of the time, twelve; free, 1876; total, 2302.

Proportion of deaths to whole number of results, 8.28 per cent. Number of patients received on account of accidents, 348.

The average number of paying patients was 21: Americans, 15.5; foreigners, 5.5.

The average number in private rooms was four.

The average number of free patients was 147: Americans, 72; foreigners, 75.

The average time of paying patients was 2.84 weeks; and that of free patients 4.41.

Fourteen per cent. of the free patients were female domestics; thirty-five per cent. were laborers; five per cent. were mechanics; and eleven per cent. were minors.

The report of Dr. Edward Cowles, Superintendent of the McLean Asylum for the Insane, for the year 1882, describes several desirable changes in internal administration. The scrubbing and more disagreeable duties of housekeeping have been assigned to ward-maids, a practice which is common in asylums for private patients abroad, but which has been adopted by very few in this country. It possesses unquestionable advantages in that it enables the superintendent to employ more intelligent and refined nurses, and enables them to devote more time to the patients. The increased attendance at night, and the appointment of a superintendent of nurses who has had long experience in an asylum for the insane, and is a graduate of the training-school of a general hospital as well, are also likely to increase decidedly the efficiency of the staff.

The employment of women as attendants in the men's wards has been tried, apparently quite extensively, and Dr. Cowles sees nothing but good results from the practice. This has not been tried, except to a very limited extent, in many asylums, and the results in these have been somewhat at variance. The plan recommends itself for several reasons enumerated by Dr. Cowles, but its success must depend entirely on the class of women that can be secured for the work.

It is pleasing to see in the report a reference to the obligation of the endowed institutions possessing financial resources similar to the McLean to offer the

best curative treatment to as large a number of the acute insane as possible. This obligation has been too little recognized heretofore by such institutions in the cases of patients of refined tastes, who are unable to pay fully for their treatment, and they have been too largely occupied by the rich. We venture to predict that in the future, when expert commissioners have been appointed who can secure a more uniform excellence in private asylums, and can satisfy the public as to its existence, the corporate institutions with large endowments will find that they can accomplish the most good with the means at their disposal by approaching more nearly the practice of the Bethlehem Hospital of London, which treats at a moderate expense solely patients of intelligence and refinement who present chances of recovery, and are unable to pay, and by leaving rich chronic patients to the care of private institutions. It is to be hoped that the needs of the class mentioned will be considered in the construction of the new building now proposed at Belmont.

DIABETIC COMA.

THE subject of diabetic coma has been attracting much attention of late both in Germany and England. In the JOURNAL (March 29th, page 294) an abstract was given of a paper just published by Professor Frerichs, of Berlin, on sudden death and coma in diabetes based upon a very large clinical experience, and supported by supplementary articles from his assistants, Drs. Ehrlich and Brieger, upon the physiological chemistry of the condition. An article by Dr. Frederick Taylor in the last volume of Guy's Hospital Reports gives the results of experience in that hospital with twenty-nine cases of coma out of a total of forty-three fatal cases of diabetes. Following the appearance of these papers a discussion, previously announced, of diabetes and the pathological changes observed in connection therewith, occupied the attention of the Pathological Society of London,[1] and two papers upon the subject by Drs. Mackenzie and Smith, originally read before the British Medical Association last summer, were published in the Association's *Journal* (April 7, 1883).

The net result of these papers and of the discussion is very negative as to the cause of coma in diabetes. The symptoms in a large class of cases indicate poisoning, but no evidence is offered of the nature of the poison. Frerichs shows pretty conclusively that acetone and aceto-acetic acid are merely results, and harmless ones, of the metamorphoses taking place in the system, and thinks that the extreme rapidity of these changes will render an identification of the poison very improbable. Both Frerichs and Mackenzie are convinced that coma in diabetes is of much more frequent occurrence than is generally recognized. Having previously given Frerichs's conclusions, we quote the following synopsis of Mackenzie's paper, which is based on a total of thirty-seven fatal cases of diabetes in the London Hospital between the years 1874 and 1882: —

[1] Lancet, April 7th.

"From this series of cases, twenty-one of which have been under Dr. Mackenzie's own care, it appears that coma and phthisis are the two most common modes of termination of diabetes. Coma is a much more common ending of diabetes than is often supposed by those who see but few cases of the disease. In this series coma of a peculiar kind was the termination of diabetes in nineteen out of thirty-seven cases, or in just over half the number. Of these nineteen cases of coma, in seven post-mortem examination showed no gross visceral disease to which the coma could be attributed; in four cases without post-mortem examination, there was no ante-mortem evidence of visceral disease in three, and in one there were well-marked signs of pneumonic phthisis during life. Further, there were eight deaths from coma, with old or recent pulmonary disease found at the necropsy; in some of these the affection of the lung was insignificant, in others advanced. The coma that closed the scene in the cases of diabetes, implicated (or followed) by pulmonary disease, had certain special characters, to be presently described, showing its connection with the diabetes rather than with phthisis. It was not the mere loss of consciousness that terminates so many exhausting diseases. Suddenly developing coma is an unusual ending of ordinary phthisis. Besides these nineteen cases, in three others death was by coma, but an obvious explanation was presented on post-mortem examination, namely, cerebral hæmorrhage, meningitis, suppurative nephritis.

"*Onset.* — Pain in the epigastrium or hypochondria, often very severe, sometimes ushers in the attack, and may precede for several days the coma. Delirium, usually of a light garrulous kind, is observed in some cases. Rapidity of pulse is occasionally the first indication of impending coma. Vomiting and diarrhœa, separately or together, was noticed in some cases for a day or two before the attack. Severe headache precedes the coma in others. Fatigue, as pointed out by Prout, and noticed by nearly all who have written on the subject, often determines coma, and the latter is thus frequently induced by a journey.

"*Special Features of the Coma.* — One of the most striking symptoms in most, though its degree varies in different cases, is a peculiar laborious breathing — an 'air-hunger,' extraordinary efforts of filling the chest being made. The patient lies gasping for breath, like a person after violent exercise, whilst no condition in the respiratory organs accounts for its occurrence. Sometimes this dyspnœa precedes the coma, sometimes the dyspnœa and coma appear together. The coma in most cases commences gradually. The patient can at first be roused, but it steadily progresses until it is profound. It occasionally commences more abruptly, and in a few cases passes off, usually to return. The surface of the body is generally cold, and the skin and mucous membranes livid; the pulse is rapid and small, and ultimately becomes uncountable. The external and internal temperature sinks exceedingly low, and Dr. Mackenzie has known the temperature in the rectum to be little over 90° F. This combination of coldness, lividity, and rapid pulse has led me for some time to call the condition 'coma-collapse.' Incontinence of urine is noticed in some patients. The breath has been noticed by some good observers to have a peculiar odor, like sour beer, vinegar, acetic ether, acetone, etc.; but in no case that Dr. Mackenzie has observed has this been detected, though he has been on the outlook for it since 1874, and has directed the attention of those watching the patient to the point. Dr. Frederick Taylor's experience is similar. It has been said that a high temperature is necessary for its occurrence, owing to the low volatility of acetone. The urine is also said sometimes to give off a similar odor, but the author has not noticed it even when evaporated. In some cases the addition of a solution of perchloride of iron to the urine produces a deep brown color. This, which is a test for acetone, Dr. Mackenzie has noticed in some cases."

It seems to be acknowledged that milky blood and fat embola are phenomena of rare occurrence, — Frerichs has never observed them, — and the former does not produce the latter. Dr. Mackenzie, after very thorough post-mortem examinations, failed to discover either fat in the blood-vessels or fat embolisms in eighteen out of nineteen cases coming under his observation.

Frerichs is followed by others in making a distinct class of cases of coma followed by death in a few hours, in which the fatal result is caused by cardiac paralysis, and not by systemic poisoning.

AN OUTBREAK OF TYPHOID FEVER.

During the last few weeks there has been an outbreak of typhoid fever on Washington Heights in the upper districts of the city of New York, and as the neighborhood has always been a very healthy one the sanitary authorities have been somewhat at a loss how to account for it. It was at first suspected that the disease was being transmitted through milk, as it was found that most of the families in which it occurred were supplied from the same local dairy, but a careful investigation of the matter showed the suspicion to be unfounded. It is now suggested that a possible solution of the difficulty has been found in the fact that the Croton water pipes on Washington Heights have many dead ends, as they are called, since the neighborhood is but sparsely built up. In these ends the water, it is thought, stagnates, and poisonous gases are thus developed, which escape at other points where the pipes are trapped. Some years ago, it seems, when there was a similar outbreak of fever in the neighborhood, these pipes were thoroughly cleaned out, and after this the firemen blew the hydrants out weekly until the complaints of scarcity of water became so frequent that the practice was discontinued. Samples of the water obtained from the pipes at Washington Heights have been submitted to expert analysis, and a report will soon be made in regard to them. Something is required besides stagnant water or poisonous gases evolved therefrom to cause typhoid fever, and this the analysis will probably not detect.

MEDICAL NOTES.

— At a meeting of the Middlesex South District Medical Society the following officers were elected: President, Dr. J. L. Sullivan, of Malden; Vice-President, Dr. Z. B. Adams, of Framingham; Secretary, Dr. Walter Ela, of Cambridge; Treasurer, Dr. J. W. Willis, of Waltham; Librarian, Dr. W. A. Winn, of Arlington; Commissioner of Trials, Dr. E. J. Forster, of Charlestown; Reporter, Dr. H. P. Walcott, of Cambridge; Orator, Dr. H. M. Field, of Newton; Censors, Dr. E. R. Cutler, Waltham; Dr. C. H. Cook, Natick; Dr. J. T. G. Nichols, Cambridge; Dr. W. A. Bell, Somerville; Dr. D. M. Edgerly, Cambridgeport.

— The nomination made by the mayor of Boston to the vacancy upon the Board of Health of the city is generally regarded, and we believe correctly, as an extremely unsuitable one.

— Beginning with the first number of the tenth volume for May 3, 1883, the *Maryland Medical Journal*, of Baltimore, will be issued as a weekly publication, and will appear every Thursday. Each number will contain sixteen pages, double column, of solid reading matter.

— Rhetorical boldness in the use of figurative expressions should be chastened by a reasonable familiarity with technical or colloquial terms, otherwise unfortunate misapprehensions may arise. One of the most prominent and revered clergymen of this city, speaking in his Fast-Day sermon of the arts of the demagogue, made the following remark, according to the verbatim report in a daily paper: "But what cares the declaimer save to get the clap and persuade the ignorant who pin their faith on his sleeve?" etc.

— A correspondent of the *New York Medical Record* does not seem enthusiastic over the state of medical education in Illinois even since the operations of the Board of Health. He thus describes a visit made to one of the *recognized* medical colleges of Chicago a short time before the end of its term. "The subject of the hour happened to be a quiz on anatomy by the regular lecturer. As soon as the throwing of orange-peels had ceased, and the embryo male and female doctors had become somewhat quiet, the lecturer began to ask about the abdominal aorta. Although there was a diagram of the vessel in front of the class, and many of the students had Gray's open before them, yet much difficulty was experienced in determining the location of the artery. Of the half of the company who answered at all, some held that the vessel was behind the sternum, one said it supplied the heart, and one man carefully affirmed that it was located one inch to the left of the left nipple. Like results were obtained when the quiz on the branches was reached. Perhaps a climax of ignorance occurred when one man said that the gland on the tip of the coccyx was the pancreas. These answers fairly represent four fifths of those given during the hour. This is one of the recognized colleges whose diploma is gladly given to any one who has taken two five months' courses of lectures. Between four and five hundred diplomas are granted each year in this city, and very few of the graduates have taken more than two short courses of study. Entrance examinations are unknown."

— A somewhat unusual question has arisen as the result of a shooting affair in Washington. Shots were fired both by a man and woman, each having a pistol of different calibre. Balls have been found in the walls of the room of size corresponding to the bore of each of the pistols. One bullet took effect in the body of the victim, and it is uncertain from which of the weapons it was fired. The man who was shot declines to have the bullet removed, as the surgeons decide that that operation is not at present necessary for his life. The prosecuting officers suggest that the court order the extraction of the missile to determine who was the assailant. The supposed location of the ball is not reported. To the ordinary classification of operations into those of necessity, expediency, etc., we shall now have to add another category, those in aid of public justice.

— Whatever the German physicians may claim for original discoveries in medicine, not much is to be said of their sense of professional etiquette. The criticisms of Esmarch and others on the management of the Garfield case are still fresh in our minds, and now Prof. Niemeyer, judging simply from the reports in the secular press and before any medical account of the

case appeared, in a lecture on the malady and death of Gambetta affirmed that the illustrious patriot was, like Garfield, the victim of his physicians, and died, not of his wound, but from the effects of the treatment. He says that the patient, who had superabundant flesh, and was of a very sanguine temperament, was allowed to eat and drink too much, was confined to his room, and deprived of water and air; whereas a more frugal regimen, lighter food, plenty of air, and frequent baths, would have saved him.

— A newspaper of the Flowery State, dazzled by the presence of greatness within her borders, declares that "numbering the President of the United States among its visitors, Florida looks down with commiseration upon the effete health resorts of the Old World."

— "Falling of the Brain" and "Delicacy" are among the causes of death returned to the State Board of Health of Kentucky.

NEW YORK.

— At the last meeting of the Academy of Medicine, held April 19th, it was voted at the request of the President, Dr. Fordyce Barker, to suspend the By-laws and adjourn until the first Thursday in October next.

— At a meeting of the Society of Medical Jurisprudence and State Medicine held April 20th Dr. Stephen Smith, State Commissioner of Lunacy, read a paper on the lunacy laws of the State and their relation to the commitment and discharge of patients, in which he contrasted the present New York laws on the subject with those of England at the latter part of the last century, and pointed out their superiority to those of most of the other States in this country.

The first speaker in the discussion which followed was Dr. Nichols, Superintendent of the Insane Department of the New York Hospital (Bloomingdale Asylum), who in the course of his remarks suggested the removal of the Supervisors of Insane Commitments. Dr. Franklin, Superintendent of the City Asylum on Blackwell's Island, remarked that the public did not understand the positions of superintendents of such institutions, and when errors in commitment were made instead of blaming the judges who approved and signed the commitments they censured the medical men. Yet at the same time they clamored for judicial interference. Dr. A. E. MacDonald, the Superintendent of the City Asylum on Ward's Island, said that the public clamor arose from two false ideas that were general, namely: *First*, that sane people were sent to asylums, and, *second*, that sane people were not released from asylums. For himself he could truthfully say that he had never known any case where a sane person had been sent to an asylum through connivance. The instances of this which he had known had occurred through mistaken diagnosis, to which many of the older physicians were more liable than the younger men on account of the greater facilities for the study of insanity and the improved methods of instruction in the subject now offered to students and graduates. He had had four patients, he said, taken from the institution under his charge on the testimony of so-called experts, and of these, three had been guilty of some overt act since regaining their liberty.

— On the 20th of April a number of medical men identified with the New Code movement, who had previously held a meeting at the house of Dr. Jacobi for the purpose of devising means for preventing the repeal of the present Code, met at the same place to hear and discuss the report of an executive committee appointed at that time. The report, after certain amendments had been made, was adopted unanimously, and it was resolved to send copies of the paper to physicians all over the State.

— On the evening of April 14th Dr. Holmes was the guest of the Lotos Club, and made a humorous address, which was followed by remarks by Drs. Fordyce Barker and A. E. MacDonald, Colonel T. W. Knox, and others. A poem, written in honor of the distinguished guest by Mr. E. C. Stedman, was also read by Mr. A. P. Burbank. On the Tuesday evening following Dr. Holmes read a paper on the poetry of Emerson, in the presence of a brilliant company, at the last meeting for the season of the Nineteenth Century Club. One of the happiest hits of the charming essay was the characterization of the common octosyllabic line as the "normal respiratory wise," a designation based on the fact that at the ordinary rate of reading one expiration is naturally allowed to every such line.

— The certificate of corporation of the New York Neurological Infirmary, an institution for the scientific treatment of all diseases of the nervous system among the poor, has just been filed at the office of the Country Club on the approval of Judge Barrett, of the Supreme Court.

— An epidemic of measles, of mild type, is in progress at the Half Orphan Asylum on Tenth Street; more than fifty of the two hundred inmates being ill with the disease.

— As it is proposed in the new charter for the city of New York, which is now before the Legislature at Albany, to reduce the commissioners of the Board of Health to a single commissioner, President Chandler and Dr. Woolsey Johnson, commissioners of the Board as now constituted, have sent a protest to the chairman of the Committee on Cities, in which they urge that the Board of Health is not only executive in its functions, but also legislative and judiciary, that is to say, it has the power of making ordinances, sitting in judgment upon nuisances, and enforcing the sanitary laws. "Questions often arise," they continue, "involving large property as well as sanitary interests, which need careful consideration and full discussion before being finally decided. Emergencies are not infrequent when cool judgment is required and heavy responsibilities assumed, and where interchange of opinion is important to intelligent action." The protest then enumerates a variety of important subjects which come under the jurisdiction of the Board, and urgently requests that the present organization of the Health Department be continued.

Correspondence.

A FEW QUESTIONS FOR DR. TYNDALE CONCERNING NEWPORT, R. I., AS A RESORT FOR CONSUMPTIVES.

MR. EDITOR, — I had not intended again to trespass upon your valuable space, of which Dr. Tyndale has already occupied so much in his criticism of Newport, but as he proposes in your issue of April 5th to add a third and "lengthy article" to the two with which he has already favored us, you will permit me to send him a few points therefor. The discussion, conducted upon both sides I trust in a perfectly friendly spirit, is attracting, I am told, the attention that the whole question of a more or less permanent residence for consumptives deserves. Certainly here in southern Rhode Island Dr. Tyndale's propositions, which were briefly referred to at a very recent meeting of the Newport Medical Society, are looked upon by the profession as a wholly new revelation, somewhat startling, it is true, and at variance with the doctrines as yet supposed corroborated by universal experience.

Dr. Tyndale will allow me to offer what I have to say in a series of simple questions: —

(1.) Dr. Tyndale is surprised that I "did not attempt to controvert" his statement that "Newport possesses not one of the requirements for a suitable climate for consumptives." He meant, did he not, to say that the climate, suitable enough for consumptives, because provedly favorable for both native and imported cases, was not suitable for the special end that he had in view? namely, the making the facts which exist conform to his theory.

(2.) Dr. Tyndale speaks with favor of "inducing persons in *all* stages of consumption to go elsewhere" than to Newport. Does he really advise that patients in the advanced stages of phthisis should be carried anywhere away from their homes, and especially so great a distance as to New Mexico?

(3.) Dr. Tyndale does not view "a fair winter climate" with the same respect as do most physicians throughout New England and the British provinces, who have longed to find just such for patients with neither the means for Dr. Tyndale's long southwestern journey nor with friends of sufficient leisure to accompany them so far. Does he condemn Newport merely in his interest for the welfare of the favored few to whose wealth a journey to the moon, were the line but open, would prove no obstacle, or does he in fact realize that both he and I are to consider, first and foremost, the great mass of consumptive invalids, in moderate circumstances, who now form the major part of New England mortality returns?

(4.) Dr. Tyndale is not so lucid as he might be in the following paragraph: "In order to be brief let me again say: That Dr. Storer's belief in the efficacy of 'local climate' and 'presumably good climate' (the ocean climate, for instance), notwithstanding the constituents of climate which determine its character, and from which arise all others (sunshine, electricity, etc.) are the barometric, hygrometric, and thermometric *fluctuations* and their mutual interdependence, and not the thermometrical *sensations*." I have read the foregoing sentence several times, with care. Grammatically it seems a little mixed, and though it undoubtedly is intended to convey Dr. Tyndale's impression of my own belief, I cannot myself make out what that impression of his really is. As I had already, with others, become convinced that he has all along labored under a misapprehension as to "Dr. Storer's belief," though it has been plainly enough expressed, and has thereby entangled himself in a sufficiently troublesome web of his own making, will he not permit me to suggest that he re-read my several papers in the New York *Sanitarian* and your own journal, which he has so far criticised, and apply to them the simple test of the facts that he himself has acknowledged, rather than of any mere theory, even though it be his own invention?

(5.) Dr. Tyndale is perfectly right when he says that "the ideal climate for consumptive candidates" . . . "requires the proof of practical results." I am not aware, however, that any one has called the mild winter climate of Newport an ideal one for consumptives. Was Dr. Tyndale, however, in earnest in seeming to advise us to send all such candidates away to "some parts of the Andes, in South America"?

To speak more soberly, Dr. Tyndale has committed several very serious errors in addition to those to which I called his attention in my previous letter.

(6.) Though professing to adopt Dr. Bowditch's views and nomenclature, Dr. Tyndale sweepingly condemns all "marine climates," and defines these as "sea, sea-coast, and inland at moderate distances only." Is he aware that he is herein directly subverting what Bowditch has labored so long and so well to establish?

(7.) Dr. Tyndale speaks of opinions which are still held by almost all of those who are recognized as experts in the treatment of pulmonary disease as regards fresh air and out-of-door life, and the general sthenic regimen, as "the old traditions," "the killing of which is one of the chief aims of my life." Does he object that in view of such an admission I have ventured to call him an extremist, and to believe, in my own mind, that the practical experience of a few more years will tend to very materially modify his present opinions?

(8.) Dr. Tyndale avers that "Dr. Bowditch did *not* recommend the Isles of Shoals as a resort for consumptives." He will permit me to quote for him the following: "Places which experience has taught me are residences favorable for consumptives. I have had actual experience of the advantages of placing patients at Grantville," etc., "and at the Isles of Shoals." "In every one of them I have had patients improve greatly, and some, whom I believe would have died in low coast or wet inland spots, have recovered, or have speedily improved, from serious symptoms." [1] And again: "I am certain that, in many cases of early phthisis, the tonic, clear, soft air of the Isles of Shoals, in summer, has been of immense service. Two patients spent the winter there. In one, a crackling throughout the whole of one breast disappeared." [2] This was in 1862. In 1881, nearly twenty years later, Dr. Bowditch had in no wise changed his opinion. In his paper upon The Isles of Shoals as a Summer Resort for the Invalid, etc., he uses the following language (he is speaking of "persons having throat or lung difficulties," who are sent to him by physicians in the West and South): 'I always take any such patients from the shore and send them either inland or to the Shoals." [3] "The variableness of the coast climate," he adds, "entirely unfits it for throat

[1] Bowditch. Topographical Distribution and Local Origin of Consumption in Massachusetts. Med. Commun. of the Mass. Med. Society, 1862, pages 124, 125.

[2] Ibid., page 126.

[3] This journal, January 6, 1881, page 1.

and pulmonary diseases. That of the Shoals, an ocean climate, would be far preferable."[1] And still again: "What cases shall we send to the Shoals? I reply, *Any* case, whether functional or organic," except "*totally hopeless* cases of *far advanced* organic disease."[2] The italics are Dr. Bowditch's. And again: "The Isles of Shoals must, from their position, ever give the best type of a New England ocean climate," which is "soothing, and at times curative, in pulmonary diseases."[3] In the face of such testimony was not Dr. Tyndale a little hasty in his appeal to Dr. Bowditch? What must then be his surprise when I remind him that Dr. Bowditch was even "inclined to believe that Nahant and Winthrop, rocky promontories projecting from the coast, will prove favorable sites"[4] to send consumptives to, although they are bathed by the comparatively cold waters of Massachusetts Bay, are exposed to the full fury of the northeast gales, and are insular only in the most liberal sense of the word. In all respects they are a hundredfold more open to strictures, like that of Dr. Tyndale, than the sheltered, Gulf-Stream tempered Newport.

(9.) Dr. Tyndale decries, and very justly, the ordinary coast climate of New England, as affecting consumptives. Was it exactly fair, however, when the exclusion of Newport from this group had been carefully shown, and its oceanic character, as defined by Dr. Bowditch, had been proved to a demonstration, for Dr. Tyndale, here as elsewhere, striving to make the facts conform to his favorite theory,[5] to ignore this, and again to misquote Bowditch? Bowditch now, as ever, condemns the mainland coast line. He now, as ever, eulogizes the insular, oceanic climate, which is distinctly that of Newport.

(10.) Dr. Tyndale says that "no investigator of the present will acknowledge local immunity as indicative of a favorable climate for consumptives as long as this immunity is not *absolute*." Does any one, even Dr. Tyndale, really hold this extraordinary opinion? To constitute absolute immunity, there can occur not one consumptive death, whether of a native or imported case. I will gladly grant that no physician lives so skillful as Dr. Tyndale, if in his ideal Andes, or New Mexico, he shall never lose a case of even advanced phthisis.

(11.) And finally. Dr. Tyndale has manfully acknowledged his very grave mistake in reference to the comparative mortality from pneumonia at Newport. In his letter of April 5th he points with satisfaction to certain ratios of mortality in States at large, and exclaims, "Behold the following, in reference to deaths from consumption: Rhode Island, one in 391 persons; New Jersey, one in 389 persons; New York, one in 473 persons; Connecticut, one in 444 persons."

Will Dr. Tyndale now kindly add a few more words? They give the same ratio of consumptive deaths to population, reduced to decimals from his own figures, and they also include the Newport statistics upon this point, as compiled by the State Board of Health from the official Registration Reports of Rhode Island. I prefer citing these rather than my personal computations from the City Records, since they prove a little less favorable to Newport than my own, and will therefore be more likely to be thought unbiased. Now there has been no question whatever raised regarding the general consumptive rate of the State of Rhode Island. It is acknowledged to resemble that of the ordinary New England coast, save that it is very appreciably and constantly smaller than the rate of the State of Massachusetts. I submit therefore that to employ this ratio as an argument against the wholly different, purely local, and exceptional conditions at Newport, the legitimate result of its insular position and oceanic climate, is what one could hardly have expected from a gentleman like Dr. Tyndale, when the statistics in question were within his reach. There were in Newport in 1877, one death from consumption in every 637 persons; in 1878, one in every 636; in 1879, one in every 448; in 1880, one in 713; and in 1881, one in 506. The average of the five years was one in 588.

The following are the decimal ratios, those of States that have been presented in the crude form by Dr. Tyndale, and those of Newport that he neglected to give. They will bear the same close comparison with each other that has been asked for the other classes of the Newport statistics of consumption.

Ratio of mortality from consumption, as regards population, per thousand: —

Rhode Island		2.55
New Jersey		2.56
New York		2.09
Connecticut		2.25
Newport	1877	1.56
	1878	1.63
	1879	2.22
	1880	1.40
	1881	1.97

Average of the five years, 1877–81, at Newport, 1.75.

Against this place Massachusetts, 3.17 (average of the same five years, 1877–81), and the still greater percentage of Boston, at least double that of Newport.

Yours sincerely, HORATIO R. STORER.

NEWPORT, R. I., *April* 12, 1883.

LETTER FROM ST. LOUIS.

ST. LOUIS, *April* 12, 1883.

MR. EDITOR, — Medical circles in St. Louis are just now considerably interested in the approaching municipal appointments, especially those in the Health Department. The question of having a medical or non-medical man in the office of Health Commissioner has long been discussed, but under the able administration of Charles W. Francis, who though a non-medical man has virtually created the Health Department of St. Louis in the last six years, it has not been prominently brought forward. Now, however, it is under general discussion. It is believed that the Mayor and Council favor a non-medical man, or at least one not at all connected with any of the various medical institutions or cliques in the city. Of his intentions, however, every one is in total ignorance. All is mere guess-work. It is said that either Dr. Powers, Dr. Frank, or Dr. Dean has good prospects for the Health Commissionership, and if a non-medical man is chosen Mr. J. J. Fitz William, now acting Commissioner and former clerk of Mr. Francis, will probably be appointed. For Superintendent of City Hospital Dr. Dean, present incumbent, is favorably spoken of, and Dr. Lundeking, now clerk of Board

[1] Ibid., page 3.
[2] Ibid., pages 4, 5.
[3] Ibid., page 1.
[4] Topographical Distribution, etc., of Consumption in Massachusetts, page 125.
[5] "Dryness," says Dr. Tyndale, "is" for most cases "the *absolute requirement*, and equability of temperature a secondary consideration." New Mexico: Its Climatic Advantages for Consumptives. This journal, April 5, 1883, page 314.

of Health, is said to have the refusal of the place. It is not certain that he wants it. At the Female Hospital Dr. Hulbert, present incumbent, will probably be returned, and Dr. Howard of the Insane Asylum will probably be supplanted by Dr. Charles Stevens who has filled the position before. These are the most important positions in the department to be filled, and the above "slate" is probably as correct as can now be made out.

During the cold, damp weather of the last of March a local epidemic of small-pox made its appearance in the southern part of the city. The first case occurred in a Catholic school and of course rapidly spread through the neighborhood. The school is in a German district where the people are much opposeed to vaccination, and consequently much difficulty has been found by the health officers in protecting the children.

Up to date there have been thirty-seven cases found and reported, all in this neighborhood. It is expected that the worst is now over, and that with the approaching warm weather the disease will disappear. Scarlet fever and pneumonia have been very prevalent this spring, but are now fading.

The State Board of Health recently provided for by the State Legislature has not yet been organized. Will advise you of its organization as soon completed.

Yours, J. B. SHAPLEIGH, M. D.

TREATMENT OF VENEREAL WARTS AND ULCERS WITH SALICYLIC ACID.

MALDEN, *April* 18, 1883.

MR. EDITOR, — At the meeting of the Suffolk District Medical Society, February 7th (the proceedings of which are reported in JOURNAL, issue of the 12th inst.), Dr. Liebmann mentioned his new mode of treating venereal warts by the application of salicylic acid in combination with cannabis indica and collodion. I would state that for the last three years I have employed the pure, dry acid in the treatment of venereal warts and ulcers. I have found it especially serviceable in cases of chancroids and chancres. My method is to fill, or pack, an ulcer with the acid which I keep constantly applied until there is a healthy granulating surface. No nicety need be observed in the local exhibition of salicylic acid, which is devoid of toxic properties and but slightly caustic in its action. For a few minutes following the application of the acid to a raw surface the pain is quite severe, but it soon subsides. I first began using salicylic acid (locally) as an antiseptic stimulant to indolent granulations while stationed at Fort Grant, Ariz., and soon after originated, I think, the method of treating venereal warts and ulcers with it — a mode of treatment quite generally adopted by a number of army surgeons in that department.

Yours truly, SOLON D. STONE, M. D.

Miscellany.

WATER SUPPLY OF CITIES.

SOME editorial remarks in the *Sanitary Engineer* (April 19th) show a just appreciation of the difficulties attendant upon the problem of water supplies for our large cities, to which we have frequently referred, and which is now beginning to attract general attention.

The consequences of the aggregation of population n one spot are far reaching. A casual observer would find it difficult to realize the fact that the existence of New York, Philadelphia, and Boston has a direct effect on the comfort and the pockets of residents of wild and sparsely settled districts fifty or sixty miles from these centres of population, in regions untraversed by railroads and incapable of being made productive. And yet the necessity for furnishing to the thronged denizens of the city a supply of the simplest necessary of life, pure water, is now causing a justifiable excitement in the minds of the farmers and property owners of remote rural regions in which water courses take their rise, and of more thickly settled and cultivated places through which these streams flow to the cities.

Both New York and Boston derive their water supply from limited areas. It has become necessary to store up the surplus waters of the wet season in order to supply the deficiencies of other seasons. This obliges large tracts of arable or pasture land in the valleys to be confiscated from the owners, and practically destroys many farms which have yielded a subsistence to their occupants for generations.

The borders of these artificial lakes are rendered uninhabitable in many instances.

Then the riparian owners on the stream below are deprived of the flow of water in the periods of filling or drawing down the ponds, and the supply of mills and factories is cut off.

More than that, it becomes essential that all the dwellers on the streams above the points where they are tapped by their larger neighbor shall be restrained from polluting the streams, and works of sewerage and of sewage disposal are forced upon them, at great expense in some instances.

The owners of property on the line of the Bronx River below the Kensico Reservoir are reported to be organizing and retaining expert engineers and sanitarians to claim damages for the diversion of the waters of that river to the New York water supply. The residents of the Croton valley, near the proposed great storage reservoir, are said to be preparing to show that they will be ruined pecuniarily and sanitarily by its construction.

The cities and towns on the Schuylkill River above Philadelphia are expecting injunctions and interminable law suits, and probably costly constructions (both of law and engineering), because the Philadelphia water is unfit to drink.

The residents of the Sudbury River valley, near Boston, are aroused to a sense of the fact that their lands are taken from them, and their water privileges abridged, and that they are threatened with compulsory cleanliness, by reason of the city of Boston insisting that they shall not put their wastes in the stream which supplies water to that city. But there is no help for it; water for the cities must be had, and no private interests or convenience can be allowed to stand in the way of accomplishing this object.

"IS IT A CANCER?"

THE *Medical Times and Gazette* quotes with editorial disapproval the following remarks by Professor Goodell in a lecture on cancer of the uterus.[1] "Now, suppose a woman comes to you, and you diagnose cancer of the uterus, are you going to say, 'Madam, I am very sorry to tell you that you have a cancer?'

[1] Philadelphia Medical Reporter, March 3d.

No; don't you do that. I should not tell even if she asked me to tell her the truth; but in the majority of cases they do not want to know, and will say to you, 'Now, doctor, if you find a cancer don't tell me.' No matter how good a woman is, or how fully prepared for the future she may be, the knowledge that she has a cancer is a terrible blow, and she at once gives up, begins to go down hill rapidly, and soon dies. I never, except in very rare instances, tell the patient that she has a cancer, but I always tell some member of the family, or a friend, exactly what is the matter. Suppose the patient asks straight up and down, 'Is it a cancer?' You do not want to tell a lie, and you do not want to say that it is a cancer. I get out of it in this way: I say, 'This is not that kind of cancer which you understand. This is not a hard cancer like that which comes in the breasts, and which is hopeless. You have a bad ulceration of the womb. It is not hopeless; there are cases which are cured.' About three years ago I learned a lesson on this point. I was asked by a physician to see a near relative of his. His suspicion was that it was a cancer. I said to him, 'Suppose that this is the case, shall I tell the lady?' He replied, 'Yes; she ought to know; tell her by all means.' After I had examined and found a carcinoma, I said, 'I am very sorry to say that this is malignant,' and then went on and told her in so many words what the trouble was. She never rallied from that. She made up her mind that her days were numbered, and that there was no use in doing anything, and in a short time she died. I say, then, never tell a woman that she has a cancer."

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 14, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	721	275	16.97	25.39	5.93	1.79	—
Philadelphia	846,984	417	110	12.67	10.75	4.54	1.19	.48
Brooklyn	566,689	263	93	15.58	25.46	4.94	6.46	—
Chicago	503,304	232	113	19.90	15.12	4.62	4.20	—
Boston	362,535	201	68	14.12	15.19	4.41	.98	—
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	167	58	17.40	12.60	7.20	3.00	4.19
Cincinnati	255,708	121	55	15.43	22.41	3.32	7.47	—
New Orleans	216,140	175	39	48.00	5.14	1.71	—	44.00
District of Columbia	177,638	83	32	10.84	16.86	—	—	—
Pittsburg (1883)	175,000	75	—	13.33	17.63	—	1.33	—
Buffalo	155,137	54	17	27.75	12.95	1.85	11.10	—
Milwaukee	115,578	58	28	20.64	6.88	12.04	3.44	—
Providence (1883)	116,755	53	8	17.01	24.57	—	—	—
New Haven (1883)	73,000	26	8	7.70	23.10	—	—	—
Charleston	49,999	34	7	11.76	17.64	—	—	—
Nashville	43,461	27	7	3.70	11.13	—	—	18.52
Lowell	59,485	13	0	61.52	30.76	—	7.69	—
Worcester	58,295	15	5	—	46.66	—	—	—
Cambridge	52,740	21	4	4.76	9.52	—	4.76	—
Fall River	49,006	26	11	19.23	19.23	—	—	—
Lawrence	39,178	15	2	13.33	33.33	6.66	—	—
Lynn	38,284	15	5	26.66	26.66	—	13.33	—
Springfield	33,340	10	0	10.00	—	—	—	—
Salem	27,598	11	6	27.27	—	—	—	—
New Bedford	26,875	14	5	7.14	14.28	—	—	—
Somerville	24,985	14	6	14.28	21.42	7.14	—	—
Holyoke	21,851	9	3	22.22	22.22	11.11	—	—
Chelsea	21,785	6	3	16.66	16.66	—	—	—
Taunton	21,213	4	0	—	25.00	—	—	—
Gloucester	19,329	—	—	—	—	—	—	—
Haverhill	18,475	5	0	—	20.00	—	—	—
Newton	16,995	3	0	33.33	—	—	—	—
Brockton	13,608	2	0	—	—	—	—	—
Newburyport	13,537	4	0	—	25.00	—	—	—
Fitchburg	12,405	2	1	—	—	—	—	—
Malden	12,017	3	1	—	—	—	—	—
Twenty-one Massachusetts towns	158,979	60	10	20.59	8.33	1.66	6.66	—

Deaths reported 2959 (no report from St. Louis): under five years of age 973: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 540, lung diseases 531, consumption 452, diphtheria and croup 126, small-pox 91, scarlet fever 83, typhoid fever 56, measles 48, diarrhœal diseases 34, whooping-cough 24, erysipelas 22, cerebro-spinal meningitis 20, puerperal fever 19, malarial fevers 16, typhus fever one. From *typhoid fever*, Philadelphia 17, Providence eight, New York and Chicago five each, Pittsburg four, Brooklyn and Cincinnati three each, Boston two, New Orleans, District of Columbia, Charleston, Lowell, Lawrence, Salem, Holyoke, Attleborough, and Milford one each. From *measles*, New York 29, Boston six, Baltimore, Salem, and Peabody two each, Philadelphia, Cincinnati, District of Columbia, Milwaukee, Nashville, Lynn, and Chelsea one each. From *diarrhœal diseases*, Chicago nine, New York seven, Boston five, New Orleans three, Baltimore and District of Columbia two each, Pittsburg, Providence, Nashville, Lynn, Somerville, and Gardner one each. From *whooping-cough*, New York eight, Brooklyn three, Cincinnati, District of Columbia, Pittsburg, Milwaukee, and New Haven two each, Chicago and New Bedford one each. From *erysipelas*, New York five, Chicago four, Brooklyn three, Boston, Philadelphia, and Buffalo two each, Cincinnati, District of Columbia, Pittsburg, and Westfield one each. From *cerebro-*

spinal meningitis, New York four, Buffalo, and Fall River three each, Chicago, Pittsburg, and Lowell two each, Philadelphia, Boston, Newton, and Attleborough one each. From *puerperal fever*, Baltimore six, Chicago three, New York and Brooklyn two each, Philadelphia, Boston, Buffalo, Fall River, Salem, and Quincy one each. From *malarial fevers*, New York six, Charleston three, District of Columbia, and Buffalo two each, Baltimore, Cincinnati, and Fall River one each. From *typhus fever*, New York one.

Twenty-eight cases of small-pox were reported in Baltimore, Buffalo four, Pittsburg two, Boston one; diphtheria 28, scarlet fever 21, typhoid fever six in Boston; scarlet fever 28, and diphtheria 16 in Milwaukee.

In 41 cities and towns of Massachusetts, with an estimated population of 1,182,711 (estimated population of the State 1,922,530), the total death-rate for the week was 19.83 against 21.74 and 22.21, for the previous two weeks.

For the week ending March 24th, in 172 German cities and towns, with an estimated population of 8,640,665, the death-rate was 27.9. Deaths reported 4635; under five years of age, 1996; lung diseases 702, consumption 690, diphtheria and croup 219, diarrhœal diseases 122, measles and rötheln 74, scarlet fever 73, whooping-cough 64, typhoid f ver 39, puerperal fever 26, small-pox ten, typhus fever five. The death-rates ranged from 54.8 in Wurzburg to 19 in Karlsruhe; Königsberg 25.9; Breslau 25.4; Munich 27.5; Dresden 27.4; Berlin 27; Hamburg 29.9; Cologne 27.4; Frankfort a. M. 21.4; Strasburg 31.3.

In the 28 great towns of England and Wales, with an estimated population of 8,620,975, for the week ending March 31st, the death-rate was 29.2. Deaths reported 4826: acute diseases of the respiratory organs (London) 672, whooping-cough 132, measles 80, scarlet fever 73, fever 60, diarrhœa 37, diphtheria 23, small-pox (Sunderland one) one. The death-rates ranged from 21.1 in Bradford to 39.8 in Manchester; Leeds 23.4; Bristol 25.5; London 28.3; Liverpool 30.2; Preston 33.4; Birmingham 34; Leicester 35.1. In Edinburgh 20.8; Dublin 36.3; Glasgow 43.

For the week ending March 31st, in the Swiss towns, population 494,390, there were 57 deaths from consumption, lung diseases 50, diarrhœal diseases 19, diphtheria and croup 11, whooping-cough two, typhoid fever two, small-pox one, scarlet fever one, puerperal fever one. The death-rates were, at Geneva 21.5, Zurich 22, Basle 29.4, Berne 42.9.

The meteorological record for the week ending April 14th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date. April, 1883.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 8	30.078	40	48	31	100	53	82	78	NW	NW	W	5	20	5	S	F	C	—	—
Mon., 9	30.180	52	64	33	68	42	48	53	W	SW	SW	9	17	18	C	C	C	—	—
Tues., 10	29.999	57	74	43	71	50	86	69	W	W	S	[2]	5	1	C	C	C	—	—
Wed., 11	29.933	40	52	37	100	100	100	100	NE	NE	N	10	12	12	R	R	R	—	—
Thurs., 12	30.029	43	60	37	92	93	100	95	SW	SE	E	3	8	10	B	O	R	—	—
Fri., 13	30.282	44	50	39	93	86	92	90	N	NE	E	13	12	1	O	O	C	—	—
Sat., 14	30.474	42	49	38	74	68	73	72	NE	E	SE	12	9	2	C	C	C	—	—
Means, the week.	30.125	45	57	37				80										16.05	1.65

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening; B., clearing up.
[2] Fresh. No record on self-register.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM APRIL 13, 1883, TO APRIL 20, 1883.

ALEXANDER, CHARLES T., major and surgeon. To be relieved from duty at the United States Military Academy, West Point, New York, August 28, 1883. Paragraph 6, S. O. 82, A. G. O., April 10, 1883.

WOLVERTON, WILLIAM D., major and surgeon. Granted leave of absence for four months on surgeon's certificate of disability. Paragraph 7, S. O. 85, A. G. O., April 13, 1883.

SHUFELDT, ROBERT W., captain and assistant surgeon. To report in person to the president of the Army Medical Examining Board, in session in New York City, for examination for promotion, on completion of which will return to proper station. Paragraph 10, S. O. 87, A. G. O., April 16, 1883.

SUFFOLK DISTRICT MEDICAL SOCIETY. — The annual meeting of the Society will be held on Saturday, April 28th, at 19 Boylston Place, at 7.30 P. M. Papers: The Quickest, Surest, and most Practical Method of ascertaining Defects in the Chromatic Sense, Dr. B. Joy Jeffries. The Diagnosis of the so-called Functional Cardiac Murmurs, Dr. F. C. Shattuck. The Anæmic Murmurs of the Heart, Dr. G. M. Garland. Election of Officers. Supper at the usual hour. Members are requested to promptly notify the Secretary of any change of Address, or failure to receive notices.

H. C. HAVEN, *Secretary*.

BOOKS AND PAMPHLETS RECEIVED. — The Pathology and Morbid Anatomy of Tubercle. Report to the Wisconsin State Medical Society. By N. Senn, M. D., of Milwaukee. (Reprint.)

Aphasia, with Details of Two Interesting Cases. By Philip Zenner, A. M., M. D. Cincinnati, Ohio. (Reprint.)

Is Craniotomy Justifiable? Read before the Philadelphia County Medical Society, February 14, 1883. By E. E. Montgomery, M. D. (Reprint.)

Sixteenth Report of the Medical Staff of St. John's Hospital. Submitted at the Annual Meeting, April 2, 1883, Lowell, Mass.

Veratrum Viride in Typhoid Fever. Its Lowering of the Pulse and Temperature. Twenty-eight Successive Cases in Private Practice, all Recovering. 1873–82. By A. W. Nelson, M. D., New London, Conn.

Manual of Gynæcology. By D. Berry Hart, M. D., F. R. C. P. E., Lecturer on Midwifery and Diseases of Women, School of Medicine, Edinboro', etc., and A. H. Barbour, M. A., B. Sc., M. B., Assistant to the Professor of Midwifery, University of Edinboro'. Vol. II. With one Lithograph and two hundred and ten Wood-Cuts. New York: William Wood & Co. 1883. (Wood's Library of Standard Medical Authors. February, 1883.)

A Manual of Auscultation and Percussion, embracing the Physical Diagnosis of Diseases of the Lungs and Heart and of Thoracic Aneurism. By Austin Flint, M. D., Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College, etc. Third Edition, Revised. Philadelphia: Henry C. Lea's Son & Co. 1883.

Labor among Primitive Peoples. Showing the Development of the Obstetric Science of To-Day from the Natural and Instinctive Customs of all Races. By George J. Engelmann, A. M., M. D. Second Edition, Revised, Enlarged, and Rearranged. Fifty-nine Illustrations. St. Louis: J. H. Chambers & Co. 1883.

Department of the Interior. Bureau of Education. Planting Trees in School Grounds. Washington. 1883.

Lectures.

THE FŒTAL ENVELOPES.

OPENING LECTURE IN THE COURSE ON EMBRYOLOGY AT THE HARVARD MEDICAL SCHOOL IN 1883.

BY CHARLES SEDGWICK MINOT, S. D.

You enter to-day, gentlemen, upon a new study; therefore it behooves us to form a clear conception of the purport and uses to a physician of the science of embryology, the conclusions of which it is my duty to lay before you.

The object of embryology is to give the history of the fœtus from impregnation to birth, when it is delivered from the uterus into the freedom of babyhood. It teaches us the laws of bodily development, and gives us an insight into the essential principles of human anatomy such as we can secure by no other means. As we go back in the history of the fœtus we find a greater and greater simplicity; the complex and puzzling secondary modifications rendering it so difficult to unravel the fundamental relations of the parts are found only in the developed child, but in earlier embryonic stages they are not yet present; therefore we have an actual material presentation of those relations of the organs and tissues, which are primary and permanent, and which enable the student, who has been seeking his way through the mazes of adult anatomy by sheer force of memory, to have a mental picture which is at once clear, interesting, and correct, and is the product of the reduction of the disorder of empirical mnemonics to the order of intelligent comprehension. Those of you who find in the profession of medicine something higher than the mere instrument of a livelihood cannot fail to enjoy the great mental satisfaction which embryology bestows upon her earnest students.

The importance of embryology in the practice of medicine is great, and due to the relations of the fœtus to the uterus, since these relations produce effects bearing upon the health and welfare of both the mother and the progeny. On the one hand are the influences of gestation and delivery, on the other nourishment and growth. Indeed, the applications of embryology to medicine, obstetrics, and legal medicine are numerous, as you will learn during your further studies. Finally, embryology is the clew to teratology, giving the explanation of many monstrosities, of abortions, spontaneous amputation of the limbs, arrested developments, hermaphrodites, and double monsters.

Surely these considerations will prevail to induce most of you to study embryology attentively and industriously.

In entering upon a new field the way is found most readily if some accustomed landmarks serve as guides; therefore we shall not venture immediately upon the consideration of the early stages of the fœtus, because these are too unlike anything you have heretofore known. On the contrary we shall begin with the mature fœtus, at or near term, and proceed backward in our history, thus passing from an organization familiar to you to organizations that will necessarily appear novel and strange. Yet the transitions are so gradual that you will not, I hope, find them difficult to fully apprehend.

The length of the period of gestation is undoubtedly variable from various causes, but normally it is about 280 days. Its termination is, of course, always definitely known by the act of delivery, but the exact time of the commencement of pregnancy, that is to say, of the fertilization of the ovum, is not known. Impregnation probably takes place soon after the entrance of the ovum into the oviduct, for it is known that it occurs in the upper end of the Fallopian tube, and that the first developmental changes go on during the passage of the ova along the tubes to the uterus. In certain animals it has been observed that if not impregnated at the upper end of the oviduct the ovum undergoes cleavage and irregular alterations, which render subsequent impregnation impossible. On the other hand we know that the spermatozoa may remain alive for at least several days in the female genital tract, so that after a coitus there is a considerable period during which an ovum may be impregnated if it enters the oviduct or Fallopian tube. It thus appears probable that pregnancy commences very shortly after the egg leaves the ovary. Unfortunately it has not yet been determined when this event occurs. It has been frequently affirmed that the ovic discharge is simultaneous with menstruation, but this has by no means been demonstrated. We possess at present no method of satisfactorily determining when gestation begins, or, in other words, the moment of conception.

At the close of gestation the fœtus weighs about seven pounds on the average, and lies normally with the head down in the greatly dilated uterus. If we examine a uterus during the last or ninth month of pregnancy we shall find it greatly dilated, the outer muscular wall very tense. Upon opening it we cut through the thick walls, and pass into an interior cavity, filled with a serous fluid, in which is suspended the embryo. The fœtus is normally bent over upon itself, curving forwards, the legs drawn up, the arms bent frontwards, the hand often raised towards the face. The head is lowermost, the occipito-parietal region being next the os uteri; the fœtus most frequently rests on its back, or a little on one side, on the anterior or pubic wall of the uterus. Abnormal positions are, of course, not infrequent, and within the range of normal positions there is considerable variety. In your obstetrical course you will study this matter with fullness; for our purpose the above description is sufficient.

From the abdomen of the fœtus, at that point which is permanently marked after birth by the navel, there springs a long, twisted, flesh-colored rope, the umbilical cord, the other end of which is inserted into a special area of the uterine wall, which is known as the placenta. The placenta is highly vascular, receiving a rich supply of blood from the mother; it also contains a second and distinct set of blood-vessels, which, by the intervention of two arteries and a vein running through the long navel cord, communicate with the fœtus.

Let us consider briefly the structure of the uterine walls, leaving aside the placenta. The whole inner surface is smooth and glistening; the outer muscular layer is, as you see by the specimen and the diagram, very thick; the space between the muscularis and the smooth inner membrane is occupied by a thick layer of a dark pulpy, vascular tissue, known as the decidua, or less commonly the caduca. By careful manipulation with the scalpel we can separate these layers still further into their real components. From the inner sur-

face we can peel off quite readily a thin, smooth membrane, the amnion. You will, I think, find it the most difficult part of your study of embryology to gather a clear notion of the origin of the amnion, but we shall not get to this until later. The decidual layer we can also divide into two parts, an inner thinner sheet, and an outer thicker one. This last is the decidua vera, and is never anything but part of the uterine wall. The inner sheet is the product of two elements, one, the outer and more voluminous, is derived from the uterus, and is called the decidua reflexa, the other, much thinner, is developed from the embryo, and is named the chorion. To review: in cutting through the wall of the uterus at or near term we should pass the following layers: (1) the thick external muscular coat; (2) the thick decidua, really composed of two parts, the outer decidua vera, and inner reflexa; (3) the thin chorion, closely united with the decidua reflexa; (4) the amnion, which is only loosely connected with the chorion. We should then come to the (amniotic) fluid and the embryo attached by the umbilical cord to the placenta.

Let us turn now to the examination of a fœtus and the uterus of the third or fourth month of pregnancy. Here, when we cut through the walls of the uterus, we no longer come directly upon the embryo, but reach first a bag suspended by one side, the placental region, to the walls of the uterus, but hanging free elsewhere, as is shown in this diagram of a somewhat earlier stage copied from an admirable figure by Coste. The outside of this vesicle is a reddened vascular and spongy layer, the decidua reflexa. At this period then the two deciduæ are not yet united, but there is space between them, in which we find usually a little mucous matter. The vera is a constituent of the uterine wall, the reflexa forms part of a sac inclosing the embryo. The inner part of the sac is made by the chorion and amnion both united to the decidua reflexa in one organization. Within the amnion is the amniotic fluid surrounding the embryo, which is in an earlier stage than we saw before, yet is attached in the same manner by the umbilical cord to the placenta. The most obvious characters of the fœtus are its small size, not far from ten centimetres in length, the great preponderance of the head, the smallness of the limbs, and the protuberance of the abdomen.

We will next consider a fœtus of thirty-five days (end of the fifth week), in which the relations of all the parts are essentially the same, with the single difference that the amnion no longer is united with the chorion; but, on the contrary, when we cut through the inner vesicle we reach an inner space, and an inner thin bag formed by a translucent membrane, the amnion. Within this lies the embryo.

It will be profitable for us to now examine the chorion and the deciduæ a little more minutely than we have yet done. With care and skill the inner vesicle or sac may be split into two membranes — the inner thinner is the chorion, the outer, the decidua reflexa. The chorion is not alike in all its parts, for it extends also over the placenta; the portion united with the reflexa is smooth, translucent, opalescent, and not very vascular. The placental chorion, on the contrary, is smooth only on the inner surface towards the embryo, while the outer or placental surface is covered with thick-set outgrowths that impart a mossy appearance to the membrane. These outgrowths are branching villi, crowded with vascular loops connected with the blood-vessels of the embryo; they fit into corresponding spaces in the maternal placenta (decidua serotina). The villous portion of the chorion is commonly known among embryologists as the chorion frondosum. The whole chorion at this stage is called the chorion verum in contradistinction to the chorion primitivum; the latter corresponds, as we shall see hereafter, to the outer part only of the verum, the inner part being formed by the allantois.

The decidua in all its parts presents a similar appearance, and is generally considered to be the product of a change in the mucosa of the uterus. Its characteristic histologically is the presence of numerous round cells, large and distinct, which have been named the decidual cells by Friedländer. There are, besides other cells, glands, fibres, and above all numerous blood-vessels. A great many authors have written upon the structure of the decidua, and of the placenta, but we are still far from any uniformity of interpretation of the observations, and therefore we will not pause long over this part of our subject, which could not be properly presented to you without entering into a detailed analysis of conflicting statements.

At a yet earlier stage, say twenty-five days, this inner or amniotic sac, with the inclosed amniotic fluid, appears still smaller, so that the space between it and the chorion is relatively larger, the space between it and the embryo relatively smaller, than we found it at thirty-five days. Moreover the amnion has no connection with the umbilical stalk of the placenta, for it now is attached to the ventral surface of the fœtus around the base of the umbilical cord, and then hangs free, making a closed sac around the embryo. In the later stage the amnion adheres to the umbilical stalk all the way from the belly of the embryo to the placenta, so that the free portion of the amnion arises then from the placental end of the stalk. In reality, then, the stalk of the later stage consists of the covering amnion, and the structures inclosed within it. At twenty-five days these structures are still uncovered, and it can therefore be seen immediately that they are two — one, the larger, is the cord which connects the embryo with the placenta, it is called the stalk of the allantois, and has within itself the blood-vessels, which transport nourishment from the placenta to the growing embryo. The second structure is a smaller cord, which hangs free between the amnion and the chorion, and ends with a dilatation; this is the vitelline cord or duct; its terminal dilatation is the remnant of the yolk sac or umbilical vesicle. The vitelline duct is connected with the embryo in front of the allantois cord. The embryo itself is very small at twenty-five days, not much over half a centimetre long, and in appearance presents very little resemblance to anything we are accustomed to regard as human in form, for the head is relatively huge, the eyes are at its sides, the mouth is a gigantic opening, there are holes in the side of the neck, the limbs are handless stumps, and the body terminates with a distinct tail.

If we wish to investigate still earlier stages we must have recourse to the study of mammalia, for the beginnings of the history of the human individual are unknown.

It will be well to leave this part of our subject to be more fully explained hereafter, because the formation of the amnion and of the allantois can be fully understood only after some knowledge of the early structure of the embryo has been gained. Let it, therefore, suffice to call your attention to the fact that in a

certain earlier stage of mammals there is no amnion and not any allantois, but there is a yolk sac, which is much larger than we have found it in man at twenty-five days, while the embryo is smaller. Still earlier the yolk sac is very large, and the embryo is a mere accumulation of cells over a little area of the surface of the yolk sac. Yet earlier, again, there is nothing but the few cells composing the yolk sac, or, as we may nów say, the yolk, and the cluster of cells marking the commencement of the embryo proper.

The stages of development preceding this are not to be found in the uterus but in the Fallopian tube. They exhibit to us merely an agglomeration of a few cells, the so-called segmented ovum. The earlier the stage the fewer the cells, until we reach the condition when there are but four cells, then two, and finally one only. This cell is the impregnated ovum, the beginning of all development, but is itself formed of two separate parts, very different in their origin and constitution, namely, the egg-cell or ovum and the spermatozoon, whose union is the act of impregnation, — the beginning of a new existence. The marvel of so great a result from so small a beginning has long continued to incite many investigators to study embryology, but though they have discovered many of the successive phases and forms, yet the cause of them all has eluded discovery, the nature of the forces of individual development, of growth with its accompanying metamorphoses of structure, is completely unknown. In these lectures we may familiarize ourselves with the succession of embryological events, but I cannot tell you, gentlemen, how that succession is caused.

Let us now reverse the order we have been pursuing and give the history of development according to the natural succession of the phases.

The ovum enters the upper end of the Fallopian tube and is there impregnated. Very slowly it moves down the Fallopian tube, undergoing meanwhile the process of segmentation, by which it is separated into a gradually increasing number of cells that arrange themselves so as to begin the formation of the embryo and its appendages. About the eighth day the ovum reaches the uterus, where it adheres to the uterine mucosa, and the reflexa grows up around it. The amnion grows out from the embryo, and the chorion is formed. The chorion unites with decidua reflexa and serotina, making a vesicle in which the embryo is contained. Meanwhile the allantois grows out from the under side and posterior end of the embryo, and spreads out all over the inner surface of the chorion, with which it unites. The embryo at this stage is about twenty-five days. It is inclosed by the amnion. The amnion is inclosed by a vesicle composed of the allantois, chorion, and decidua (partly serotina, partly reflexa). This vesicle is suspended from the wall of the uterus, where the vesicle and the uterus are united; their union forms the placenta. Usually during the fifth month the vesicle and the walls of the uterus around it grow together, and the space between them is obliterated. Finally, we find that the amnion enlarges, lays itself against the allantois, and uniting loosely with it becomes the innermost constituent of the vesicle inclosing the embryo. Thus all the coverings and envelopes are united together, so that in mature pregnancy we appear to pass through but a single uninterrupted wall of tissue when we cut open the uterus. In reality the wall is composed of the following layers, from within outwards: amnion, allantois, chorion, decidua reflexa, decidua vera, and muscular layer of the uterus. Of these layers the first three are derived from the embryo; the remainder are uterine in origin.

Original Articles.

PUERPERAL SEPTICÆMIA.[1]

BY W. N. BRYANT, M. D., CHESTER, VT.

I WISH to express my sincere satisfaction that an imperfect and cursory review of the subject of blood-poisoning in puerperal women given this Society some time ago, has stimulated a desire to further discuss a topic which, in my opinion, receives from us much less consideration than its importance demands. I would not trespass upon your forbearance by presenting to you my former very imperfect article without revision, and have consequently entirely rewritten it, making such additions of facts as have in the mean time come to my knowledge. The literature of this subject is, for the most part, of an unsatisfactory and conflicting nature; as is always the case with disorders whose pathology is undetermined or in dispute. It consists mainly of monographs and reports of cases published in the current periodicals of the day. Most of our text-books upon obstetrics and diseases of women, with one or two exceptions, either ignore the subject or refer to it in a very casual manner. Barker and Playfair, among others, have written brief treatises upon the puerperal state, where they treat more at length of septicæmia; but their views are in direct opposition concerning the pathology and ætiology of the disease.

The terms puerperal septicæmia, puerperal fever, childbed fever, blood-poisoning, and puerperal peritonitis, have by some been made interchangeable and synonymous, while by others they have been described as essentially different disorders. To go over all the differing theories that have been advanced as to the character of this disease would be a thankless task. By reducing this complex problem, however, to its prime factors, we find the solution hinging upon the question, Is there an essential, specific fever peculiar to the puerperal state and independent of the septic element? Or, is this septic element capable of producing all the differing conditions that have been described under the above-named titles? Dr. Putzel, of New York, in a prize essay at Bellevue Medical College, reported in *American Journal of Obstetrics*, for August, 1875, makes a strong argument for the individuality of the two principal conditions — puerperal fever and puerperal septicæmia. The former he regards as a specific fever, zymotic, contagious; the latter as accidental and non-contagious. Dr. Fordyce Barker also adopts this view. Professor Playfair, on the contrary, regards the existence of a specific puerperal fever as a myth, claiming that all the phenomena developed during its course are the direct result of septic infection, that is, essentially a pyæmic process, starting from a focus of local infection and developing the various inflammatory and embolismic conditions observed as complications. Reasoning from the recorded experiences of others, as well as from my own necessarily limited experience with this disorder, I heartily indorse the latter view and believe the term "septicæmia" to be as proper and expres-

[1] Read before the Connecticut River Valley Medical Association, October 25, 1882.

sive as any we can use to designate the different phases under which so-called puerperal fever may appear. The term "sapræmia" has been proposed as describing poisoning from the absorption of the chemical elements of decomposition into the blood, as distinguished from poisoning by the multiplication of organisms in the blood. This may be scientifically more correct, but its use would tend to add to the confusion already existing as to nomenclature. Therefore by the term septicæmia I desire to include all the symptoms incident to childbed fever.

The causes of puerperal poisoning may be immediate and predisposing. The immediate or direct cause is, as has been premised, the absorption into the blood of septic or putrescent matter, derived either from the inevitable necrotic process of the maternal parts incident to parturition and developed *within* the patient; or supplied from *without* by the attendants, instruments, or otherwise. These causes have, by different authors, been termed autogenetic and heterogenetic according as they arose from within or without the patient. There are many general or predisposing causes which are referred to by writers upon this topic, among which I will mention the following: Want, mental depression, primiparity. It seems established that primiaparous women are more subject to this accident than others; probably from the fact that their labors are apt to be more severe, this causing more laceration and contusion of the genital tract, whereby the absorptive area is increased. Meteorological conditions. Damp weather is said to afford more cases than dry, vitiated air is another cause, as is also infection and perhaps contagion. It seems likely that the prevalence of contagious diseases as scarlet fever, diphtheria, etc., predispose to septicæmia.[1] Individual predisposition also plays an important part in its production, that is, some patients are affected where others would not be. Dr. Bernady, of Philadelphia, reports in the *Journal of Obstetrics*, of July, 1880, the cases of six women who between them had twenty-three labors with septicæmia occurring *fifteen times*. It is obvious that, if this disease depend upon septic absorption, those local conditions which render such absorption possible, or which facilitate it, must act as powerfully predisposing causes. Such conditions are, as referred to, lacerations and erosions of the mucous membrane, with contusions of the soft parts which give rise to swellings and tumefactions, thus hindering the free discharge of the infecting material. Long continued labors and the maladroit use of instruments would tend to produce these conditions and should be classed as causes. I would not be understood as deprecating the use of forceps. In fact their early and skillful use will shorten an otherwise tedious labor and thus obviate its accidents, making them indeed a prophylactic agent. As illustrating the necessity for free evacuation of the lochia I beg to refer to a case I have already had the honor to report to this Society: Mrs. R., rather tedious labor, instrumental delivery. After a few days developed intense septicæmia, which under active disinfecting treatment subsided partially, but was still marked enough to rapidly reduce the patient. After a time a small fibroid which probably the contractions of labor had partially detached, and which had been acting as a ball-valve to retain the discharges, descended within reach and was removed. On its removal the septic symptoms promptly disappeared, although the area of possible absorption was largely increased, this disadvantage being more than off-et by obtaining a free discharge for the poisonous lochia.

[1] See essay of Dr. Putzel referred to above.

Among the extraneous causes (heterogenetic) I need only refer to the possibility of infection from the nurse, accoucheur, or the use of infected instruments. This method of infection is too well established and affords too many glaring examples to allow of any dispute.

I wish also to refer to the influence of a *surface chill*. And in this connection you might as well try to destroy a Mussulman's faith in Mecca and the tomb of the prophet as to endeavor to dissuade a typical country nurse from the belief that "catching a cold" is an amply sufficient basis upon which to rear the superstructure of any conceivable disease that may attack a lying-in woman. Nor is this view (somewhat modified) confined, in my experiences, alone to the laity. I do not wish to undervalue the influence for ill that undue exposure may have upon a puerperal patient; but to refer an attack of septicæmia to a "cold" would be as puerile as to attribute a typhoid fever to the same source.

As regards the pathology of this disorder it is similar to the pathology of septic poisoning under other circumstances. We believe it to be a direct absorption into the blood of the products of decomposition. How its presence there produces given symptoms of disease is a matter of theory, not of demonstration. Klebs and others have claimed that it operated by the production and development of bacteria and micrococci. This, on the other hand, has been disproved — to their satisfaction certainly — by Billroth, Robbins, and Samuels. Those who were present one year ago will remember that Dr. Goldsmith, in the course of some very instructive remarks upon this topic, referred to the fact that a German experimenter had succeeded in isolating the poisonous principles of septic discharges in the form of alkaloids, of which there were two. The absorption of one of these produced a true inflammation of the tissues with which it came in contact. The other principle under similar conditions acted as a depressing toxic agent, producing the distinctive features of so-called blood-poi-oning. Thus the absorption of putrescent matter would be followed by one or both of these conditions, as one or both of these principles were present and were absorbed. It is well known that we get two distinctive conditions complicating the lying-in state; one, characterized by the occurrence of inflammatory lesions of the abdominal and pelvic organs, such as peritonitis, peri- and parametritis, etc., of virulent type often progressing to suppuration and commonly fatal. Another, unaccompanied by pronounced inflammatory symptoms, presents the appearances of profound toxæmia. Very frequently the conditions coexist with a predominance of one or the other. It is this difference which has given rise to the confusion of nomenclature and led many to regard them as distinct diseases. The discovery above alluded to offers a rational explanation of these differing conditions, and the theory, if true, would seem to prove their identity of origin. Furthermore the results of treatment will substantiate this view.

With this view of its pathology we now come to discuss the clinical aspect and treatment of puerperal septicæmia, in speaking of which I shall limit myself entirely to the consideration of the non-inflammatory type of the disease, without special reference to those cases which are complicated by peri- or parametric inflammations. This for two reasons, namely, a due consideration of both phases would unduly prolong

this paper, and, again, the inflammatory form, although of a more serious nature *per se*, occurs much less frequently, making the former of more *practical* interest. The symptoms of blood-poisoning also, as a rule, take precedence, and by an early and energetic attention to these cases are frequently aborted which would otherwise go on to develop inflammation. Thus by early treatment of the one the other may frequently be prevented. Symptoms of septic infection may occur, if developed from within the patient, at any time after the fourth or fifth day, usually just about that time. Dr. Parrish claims that autogenetic cases cannot occur previous to the *eighth day*. This is denied by competent authority, and I am sure from my own observation must be incorrect. If the cause be from without it may occur at any time after delivery. Cases have been reported as occurring previous to labor even. They would probably bear investigation before being accepted.

This disease may present itself in either a mild or severe type, and between the two there is such a marked difference that I prefer to consider them separately. First the severe form. It is ushered in with a chill, more or less severe, but in direct ratio to the intensity of the infection. This is usually the signal for calling the physician, and by the time he arrives reaction will have been established. The patient will present a deeply flushed face, rather rapid respiration, dry, red tongue, pulse of 120 or 130, possibly more, per minute, and the thermometer marking anywhere from 103½° F. to 107¾° F. The bowels present no constant condition, but are more often relaxed than otherwise. On inquiry it is found that for twenty-four hours previous the lochia have been scanty, are now well-nigh suppressed, and of very offensive odor. The secretion of milk, if established, is lessened. There is also present generally a peculiar mental agitation, difficult to describe, but certainly well marked in many cases. It manifests itself by a tremulousness of speech and an anxious or even frightened cast of countenance. In fact it is not uncommon to hear such patients speak of a terrified feeling. The high temperature will soon abate, profuse diaphoresis occur, and the patient will seem much improved. The improvement is illusory, the lull temporary. Another chill will occur, and still others, each leaving the patient more prostrated. The mental disturbance progresses to actual delirium, a typical adynamic or typhoid condition is developed, and the patient dies. This is, in brief, the history of a severe case of septicæmia allowed to pursue its natural course. In the paper I prepared upon this subject previously, in alluding to the peculiar mental condition of these patients, which I had frequently noticed, I was uncertain whether it was peculiar to this disease, or simply the result of excessive pyrexia. I have noticed, in the *interim*, several allusions to this condition in point, in some of which it was suggested that the mental disquietude was due to the changed composition of the blood, the septic material in it irritating the brain. As to the height of temperature mentioned I would refer to cases reported in the New York *Medical Record* by Dr. Upham, of Yonkers, N. Y., where the temperature reached 106¾° F. and 107¾° F. I have measured the former temperature in these cases, and markings of 105° F. and 106° F. are not rare. These high temperatures, however, are very evanescent, an hour or less making a difference of several degrees.

The mild form of this disease presents a strikingly different spectacle. The physician possibly may not be called throughout its course, at most consulted at his office by patient's friends. The history of these cases is about as follows: No distinct chill, but oftentimes there are frequently repeated feelings of chilliness for several days, accompanied with slight fever, general malaise, disordered condition of the digestion, with irregular and rather offensive lochia. The case may progress much in the same way for a week or even two (perhaps more), when the symptoms gradually disappear, and the patient convalesces, it being only remarked that she "got up from her confinement rather poorly."

I suppose, gentlemen, some of you may object to admitting this last case as an example of septic poisoning. This is a matter of much practical importance, for if these cases *are* septicæmic, by neglecting active measures and leaving them to themselves we expose our patients to the imminent risk of the development of the more serious form of the disease; while at best their confinement is prolonged, and their recovery less satisfactory. I do not know that I have any positive evidence to adduce as to the correctness of this classification, but will content myself with making the following inquiries and statement: Is there in this theory anything impossible, irrational, or inconsistent with what we *know* of septic poisoning? We get very mild grades of diphtheria, an infectious disease. We get cases of typhoid fever so mild that patients are about the house throughout its course. Why not, then, a mild grade of septic infection? Finally, the results of treatment, to my mind, amply demonstrate the truth of this view. The diagnosis will present no special difficulties. If in a malarious climate the first chill might mislead, but subsequent symptoms would soon set the matter at rest. With septic chills we get more intense reaction; they are not periodic, nor are they controlled by quinine. If seen in the prodromic stage, before the occurrence of a chill, the disturbance may be attributed to so-called "milk fever." In connection with this Cazeaux remarks: "Should the pulse exceed 100 per minute its cause must, as a rule, be sought outside of milk fever." Any rule of this kind is obviously difficult to formulate, but this is, perhaps, as good as any, inasmuch as in this, of all diseases, prevention is our sheet anchor. As to duration, there are some fulminant cases which are fatal within forty-eight hours. Treatment also materially affects the duration. A fatal case left to itself would, it is estimated, last from five to seven days. Convalescence is usually rather rapid when once established. Of course cases that recover, and those presenting inflammatory complications, often run a much more tedious course.

Accepting the views here set forth as to the pathology of this disease there can be but little question concerning the main indications for treatment. These are, first, to prevent further absorption of septic matter, and next to enable the system to react safely from that already absorbed. The first indication is to be attained by guarding the patient carefully from all outward sources of infection, and by securing thorough disinfection and free discharge for the poisonous lochia. For the second indication we must rely upon a generous diet and free action of the eliminative organs, reënforced, if necessary, by an active use of stimulants and tonics. To attempt to secure disinfection of the lochia by means of antiseptic irrigations, vaginal or

uterine, is at present the well-nigh universal custom of obstetric practitioners everywhere. The methods and medicaments vary, but the central fact remains that in the treatment of puerperal septicæmia the great desideratum is *thorough disinfection*. It is the *sine quâ non* of success. It is, indeed, oftentimes the beginning and end of treatment. Inasmuch, then, as disinfection, to be successful, depends upon the method of its use more than the drug used, I wish to discuss it more in detail. To expect success from simply leaving directions with the nurse to use vaginal washes occasionally will generally prove a futile hope. The uterine cavity itself, the source of septic supply, *must be reached* and thoroughly irrigated to obtain the desired result. To effect this end the physician must personally attend to it, at least till some competent person has been instructed.

The instrument used is a matter of considerable importance. A common Davidson syringe may be made to answer, if no other is at hand; but as it throws an intermittent stream, and the force is regulated by the hand, great care should be enjoined, if passed into the uterus, that the stream be projected with the utmost gentleness, remembering the supposed possibility of forcing liquid through the Fallopian tubes. Care should also be used that the valves are tight and the instrument well filled before introduction, that no air may be forced in. The so-called fountain syringe is much more convenient, as it throws a steady stream, the force of which can be regulated by the height to which the reservoir is raised. With either instrument the large vaginal tube should be used, which, guided by the finger, can be passed into the uterus in the same manner as can a sound. The great disadvantage is the shortness of the metallic tube. Uterine irrigating tubes are manufactured, both single and double, which are exceedingly convenient, but not always at hand when needed. I have found a block-tin catheter, which can be straightened to any desired degree, a very effective and handy instrument, attaching to syringe by means of short rubber tube. A gum catheter could be made to answer by making additional perforations. Whatever form of instrument is used the most scrupulous cleanliness should be observed, and both hands and instruments disinfected before using. In case of contracted os a double current instrument must be used, but in practice we find that in most if not all these cases the os is soft and patulous, easily admitting the finger, and often two of them.

The necessity for frequent repetition varies, but in a moderately severe case not more than three hours should elapse between the washings for the first twenty-four hours, in very bad cases not more than one. After the first day the interval may be lengthened, provided the symptoms seem under control, to four and six hours. It is best to use a night and morning wash for some time during convalescence. It is true this involves labor, may even in some exceptional cases involve the constant attention of the physician for a certain time, but in this disease labor and promptitude are the requisites of success. As a rule, in the majority of cases, if the physician sees the patient morning and evening, each time *himself* irrigating the uterus, the nurse may be trusted in the mean time to apply the vaginal washings, during which some of the fluid is likely to reach the uterus from the open condition of the os.

A word as to the manner of using these irrigations, and I beg pardon for referring to what may seem a trivial detail. They may be administered with patient upon a bed-pan, but it is not convenient or wholly safe. In this position the perinæum is pressed forward so as to close the vaginal outlet antero-posteriorly, and unless great care is used to open the parts with the fingers the return of the fluid is impeded, and too great pressure may be gotten up within the uterus. A plan I have found very satisfactory is as follows: place the patient upon her right side, draw the hips well to the edge of the bed, so that they almost overhang; crowd under the hips one edge of an obstetric blanket, common rubber blanket, oil-cloth, rubber coat, or *anything* waterproof. Gather the opposite edge into a wash-bowl or bucket and you can irrigate your patient with safety to her, convenience to yourself, and a due regard to the bed-clothing.

As to the amount of liquid, enough should be used to produce a return current clear and free from detritus, not less than a pint certainly. If economy be necessarily an element in the case a preliminary wash of plain water may be used, and finally a smaller quantity of the disinfectant. Since writing of this subject previously an instrument has been brought to my notice called Molesworth's vaginal suction syringe. It consists simply of a glass cylinder of the size and shape of a common glass speculum, save the flange, and to this end is attached a large rubber bulb, the whole instrument containing nearly a pint. After being filled the instrument is introduced first a short distance, afterward further, while the bulb is alternately compressed and relaxed, drawing back by suction the injected liquid. Its size dilates the vagina, effacing the folds of mucous membrane, in the sulci of which the discharges must be to some extent retained in spite of the use of the ordinary syringe. It is the ideal vaginal syringe, and while it will not take the place of the long tube for a uterine irrigator, it is the one of all others to leave with the nurse, as they can easily use it, while its application requires no special position of the patient. Its points of advantage seem to be simplicity, convenience, and efficiency.

The material used is not a matter of great moment. I find recommended by different authors carbolic acid, salicylic and boracic preparations, tincture iodine, Condy's fluid, chlorine, bromine, permanganate of potassa, etc. No doubt any of them are efficient if properly used, otherwise none of them would be so. Bromine, it is stated, unites chemically with the poisonous alkaloids before referred to, forming an innocuous compound. It is, however, unpleasant to handle and expensive. Carbolic acid is undoubtedly most often resorted to, and is, I am confident, able to answer all the indications. An efficient solution seems to be about ʒij. to Oi. of water, although some recommend much stronger preparations. For general means iron, quinine, and whiskey are efficient so far as drugs are concerned. Sedatives of all kinds are to be avoided, although a moderate use of opium is generally admitted to be beneficial. Measures to cut short the chill will, it is stated, moderate the subsequent reaction.

If the basis of pathology here indicated be correct, it follows that puerperal septicæmia ought to be a preventable disease. Theoretically it is so, and to a great extent practically. If proper precautions are taken during labor and thereafter infection will be exceedingly rare.

The disease once established, prompt and thorough measures of treatment generally control it at once, provided they are instituted sufficiently early, before complications arise. We are too apt to approach this disease in a hesitating, undecided manner. We have to contend with our ideas of the dangers of intra-uterine medication under ordinary circumstances, and consequently the all-important measures of local disinfection are timidly employed and utterly fail of their object, thereby creating still further distrust of the measures themselves.

As to the propriety of these methods, I would repeat, we must disabuse our minds of the general prejudice against *intra-uterine* washes, *so far as it applies to puerperal cases.*

There is no analogy at all between a puerperal and non-puerperal uterus. The latter has a distinct neck, firm walls, small canal, intact mucous membrane, very sensitive oftentimes to any irritation. In the former the neck is effaced, the opening perfectly free, with a large part of its inner surface denuded and discharging a truly poisonous material, the exit of which is frequently hindered by the presence of coagula, tumefaction of the parts, or other causes, and which is bound to be absorbed in greater or less degree by the exposed vessels of the denuded and ruptured surfaces of the genital tract. The necessity for cleansing and disinfection in such a case is just as great as with a similar lesion on the surface, more even, for here the facilities for discharge are less adequate.

Finally, I beg leave to refer to the following authorities, who in their writings distinctly insist upon *intra-uterine* irrigations in puerperal poisoning. Some of them recommend the routine use of antiseptic washes in all cases as a preventive measure, while none of them condemn it. Playfair, notably, recommends that all lying-in women be treated with a disinfecting uterine wash, morning and evening. The following gentlemen among many others indorse the above outlined treatment of puerperal septicæmia: Dr. Park, Glasgow, J. Matthews Duncan, J. N. Glover, Hugh Miller, W. S. Playfair, Alfred Meadows, Walter Izard, Va., J. Holt, New Orleans, Carl Richter, Berlin, W. H. Parrish, Philadelphia, Dr. Larrabee, Louisville, Edward J. Tilt, and others.

In regard to the identity of so-called milk fever and septicæmia I have nothing new to offer. It is a theory that ought to repay investigation.

I believe, gentlemen, that the theory of the pathology and treatment of this disease as here discussed is correct; that it is compatible with what we at present *know* of its manifestations, and in keeping with the views of the best obstetricians of our day. The logical conclusions may be thus summed up: —

I. Puerperal septicæmia is a strictly infectious disease, depending upon the absorption of a specific *materies morbi.*

II. The infecting material may come from without or be developed from within the patient.

III. It is amenable to treatment, which should always have for its first object thorough local disinfection.

IV. It is a preventable disease, and to this end the utmost care should be used by all attendants upon puerperal women to guard them from infection from without, while a systematic course of antiseptic uterine washes should be given night and morning in all lying-in cases for the first ten days following delivery.

REPORT ON DISEASES OF THE SKIN.

BY GEORGE H. TILDEN, M. D.

PATHOLOGICAL CHANGES IN THE SKIN IN MEASLES AND SCARLET FEVER.[1]

NEUMANN gives the results of the microscopical examination of specimens of skin taken from cases of the above diseases. The specimens were hardened in a dilute solution of chromic acid, and colored with carmine, hæmatoxyline, and picro-carmine.

Measles. The pathological changes were almost entirely confined to the glands of the skin and to the blood-vessels. About the walls of the blood-vessels, principally in the upper layers of the cutis, were found collections of round cells, which in crowded masses surrounded the loops of the blood-vessels even in the papillæ. The blood-vessels themselves were dilated and full of blood. The coils of the sweat glands as well as the excretory ducts of the same were enveloped in accumulations of round cells, while at the same time the neighboring tissues were free from these cells. These collections of cells were always situated outside of the walls of the glands, never within the same. The sebaceous glands presented like changes. The hair follicles showed rounded protuberances, which corresponded to the points of insertion of the erectores pilorum, and which were probably caused by contraction of these muscles. In the muscles themselves there were to be found, between the proper cells of the muscular tissue, scattered round cells, evidence of the participation of the muscular tissue in the inflammatory process. In the same manner as the sweat glands the hair follicles, in their entire extent, were seen to be surrounded by collections of round cells, which were more numerous in the lower than in the upper part of the skin.

Scarlet fever. The cells of the rete mucosum, notably the nuclei of the same, were swollen. In the lower layers of the rete (Stachelzellenschicht) in many preparations the cells were elongated, of a spindle shape, and formed here and there cavities which were stuffed full of exudation cells. This however to a less extent than in variola. In many places were discovered circumscribed extravasations of blood, by reason of which the cells of the rete mucosum were forced apart. Of particular interest were the exudation cells, which were very numerous and closely packed, reaching even into the horny layers of the epidermis. Occasionally these exudation cells were found to have taken the place of the epidermal cells, appearing upon the free surface of the skin, and being thickly grouped around the excretory ducts of the cutaneous follicles.

The tissues of the cutis itself were swollen, the bundles of connective tissue in the same being thickened, and in places separated by collections of exudation cells, as well as by greatly enlarged blood-vessels, which were dilated to such an extent as no longer to be made out as distinct loops in the hypertrophied papillæ. These collections of exuded cells, especially in the upper portions of the cutis, followed in a general way the direction of the sweat glands, hair follicles, and blood-vessels, but they were of such extent that it is impossible to determine, as in the case of measles, the starting points of the original accumulations. The above condition of things explains why scarlet fever during the stage of desquamation possesses such a high

[1] Medezinische Jahrbücher, 1882, 2 Heft, p. 159.

degree of contagion, and why the possibility of contagion exists until desquamation is at an end, which in some cases may not be for several weeks.

Conclusions. In measles the pathological process in the skin affects chiefly the blood-vessels and glands, while the tissue proper of the skin, as well as the epidermis, presents no marked changes. All attempts to transmit measles by inoculation with epidermal scales have been ineffectual, while inoculation with blood taken from persons suffering with measles, as well as inoculation with tears, nasal mucus, and saliva, have been attended with success. The crusts of variola and the desquamated epidermis of scarlatina may convey these diseases from sick to healthy individuals, while the same is not true of measles, which differs from the two former maladies in the location of its pathological products.

From the fact that in measles the pathological products of the disease are situated more particularly around the blood-vessels and cutaneous glands it may be assumed that the infectious material of the malady, whatever its nature may be, is eliminated from the system through these channels. The eruption of measles is therefore analogous to those produced by the internal administration of various drugs, which eruptions are developed in the cutaneous follicles. Such drugs, the most noteworthy of which are iodine and bromine preparations, are excreted by the glands of the skin, and in order to reach the latter and thus be gotten rid of they must first pass through the blood-vessels. It is not difficult to demonstrate the presence of such drugs in the sweat, tears, nasal mucus, and in the pus of an acne pustule. By reason of the above facts it is not unfair to regard in the same light the pathogenesis of some of the contagious exanthemata.

URTICARIA PIGMENTOSA.[1]

The individuality of this affection was first recognized by Nettleship who published an example of the same in the *British Medical Journal*, No. 324, September, 1869. Since that time there have been reported fourteen cases of the disease. The malady makes its first appearance in the earliest infancy, the average age at which it was first noticed being about ten weeks, the extremes of the series of ages being one week and twenty-four weeks. It is chronic, lasting for years, three of the cases having been seen by the reporters thereof at the ages of six, seven, and eight years respectively, while a fourth patient was eighteen years old at the time of observation. In a large proportion of cases the patients were healthy in other respects, and in only one instance is it distinctly stated that the child was otherwise an invalid. The eruption as a rule shows itself first upon the trunk, where it is always most numerous, afterwards spreading to the extremities and face. As far as can be gathered from the histories of the cases, previous to their being seen by the observers thereof, the elements of the eruption consist at the onset of the disease of the ordinary wheals of urticaria. The patients were first seen months, and in some instances, years after the beginning of the disorder. The eruption is then described as being made up of round or oval, somewhat elevated, spots, red, brownish red, brown or yellow in color, giving little or no evidence to the touch of infiltration, and surrounded by skin of normal appearance. Pressure causes the red color to disappear, but the brown and yellow shades are not thus affected. Upon local irritation of these spots they often become congested and filled with blood, displaying a more ardent red hue, the intensity of which afterward abates. The skin was found in many instances to possess marked irritability, which manifested itself by the development of wheals at the slightest provocation, and a notable susceptibility of the skin to cold is mentioned in two cases. This cutaneous excitability seems often to diminish with time, but the effect of treatment has been merely palliative. The ætiology of the disease is shrouded in the usual darkness. The affection, as summed up by Lewinsky,[2] is a chronic development of urticarial wheals, which begin during the first months of life, and which leave, upon their disappearance and in their place, characteristic pigmented spots of an unlimited duration.

G. and F. E. Hoggan have had opportunity to examine microscopically a specimen of skin taken from a patient suffering from this disease. The piece of skin, which had been excised from the living subject, contained a fully developed wheal, which showed upon section a hitherto unnoticed peculiarity, probably in like manner possessed by all acutely developed wheals, such as are seen in ordinary urticaria. The wheal was of the thickness of a split pea, and sections thereof when stained with kalium or hæmatoxyline were less deeply colored than the gelatinous tissues of the subjacent skin. The wheal was bounded underneath by a straight line, which separated it from the cutis below, and above by the curved line of epidermis which covered it. The microscope showed the wheal to be made up almost exclusively of a mass of thickly crowded cells, which in the centre of the lesion resembled the closely grouped seeds of a pomegranate and possessed scarcely any intercellular substance. At the borders of the wheal these cells were less numerous and could be distinguished entangled in the tissues of the skin. At the upper surface of the wheal these cells crowd in masses into the epidermis, while below they are pretty completely separated from the unchanged tissues of the underlying cutis by the distinctly marked line mentioned above. The individual cells are quite large in size, possessed of a clear protoplasm, and are grouped in a peculiar manner, forming more or less distinct pillars or lines disposed at right angles to the base line and line of overlying epidermis. In arrangement and appearance they resemble very much the cortical cells of the supra-renal capsules. There exists no proper œdema, as has been assumed, either in the substance of the lesion itself or in the normal tissues of the surrounding skin, and the lymph vessels are not only permeable but even dilated. The blood-vessels found imbedded in this mass of exuded cells, as a rule, run in a direction parallel to the columns in which these cells are arranged. Towards the border of the wheal these cells completely ensheathe the blood capillaries, so that a cross or long section of the latter resembles in a rough way the section of a sweat gland, the blood-vessel representing the calibre, the cells the lining epithelium of the same. Between and parallel to these pillars or columns of cells can be made out narrow bands of gelatinous tissue, which extending through the wheal connect the lower layer of epidermal cells covering the lesion with the base line which bounds the lower border of the same.

The whole appearance points to an important fact,

[1] Monatshefte für praktische Derm., 1882, No. 8, p. 235, and 1883, No. 2, p. 44.

[2] Virchow's Archiv, Band 88, Heft 3, p. 576.

namely, that within a period of time not longer than a few moments the blood-vessels and capillaries of the skin, upon the requisite irritation, may become dilated, and a rapid exudation of white blood corpuscles or wandering cells take place to such an extent as to form a wheal. At the same time that this exudation occurs the protoplasm of the cells becomes swollen, the cells themselves remaining stationary. The process takes place just below the lowest layer of the epidermis, which together with its gelatinous bed is forced upward from the subjacent papillary layer of the skin, still retaining connection with the latter by means of the gelatinous strings or bands mentioned above. The epidermal cells are unaltered, with the exception that in the lower layers of the same, not only in those which cover the wheal, but to a still greater degree in the neighboring epidermal cells which are not raised from their bed, is formed a yellowish or yellowish brown pigment, which explains the brown coloration of the lesions. Nowhere is there any evidence of hæmorrhage.

HÆMATOGENETIC EXANTHEMATA.[1]

Under this title Behrend arranges (1) eruptions occurring after the internal administration of drugs or the use of certain articles of food; (2) eruptions which may appear after vaccination and childbearing, or in consequence of injuries or surgical operations; also those which accompany septicæmia or pyæmia; and lastly, certain forms of eruption which may be connected with the performance of menstruation. The reason for this method of classification is that in the opinion of the author these various forms of eruption are caused, in part at least, by changes in the blood, which are capable of clinical demonstration.

I. The "exanthemata ex usu medicamentorum" are subdivided into three groups: —

(*a*.) Eruptions occasioned by the specific action of drugs. These consist in erythema brought about by paralysis of the vaso-motor nerves, and may be met with after the use of large doses of belladonna, hyoscyamus, and stramonium. The most common of these is the erythema due to the specific action of belladonna, and this may be taken as the type of its group. It is unaccompanied by fever or any subjective sensations referred to the skin, and appears as a diffuse redness, often confined to the face, but also occurring upon other parts of the body, where it consists of a finely punctated erythema. In many cases redness of the mucous membrane of the mouth and pharynx is also seen. These manifestations vanish with the elimination of the drug from the system, and are often of but a few hours' duration, being always accompanied by dilatation of the pupils. In addition to the above drugs arsenic is capable of producing cutaneous hyperæmia, and has been known to cause an eruption of herpes zoster, which is always attended by the other symptoms of arsenical poisoning, and disappears upon disuse of the drug. Its localization is as varied as that of ordinary herpes zoster.

(*b*.) Eruptions caused by the elimination through the skin of certain drugs. The elimination of various substances by means of the skin leads sometimes to inflammatory processes, which must of necessity affect its glandular apparatus, since it is only through these glands that cutaneous excretion can take place. These eruptions consist, therefore, in follicular inflammation manifested by the appearance of acne and furuncular lesions, which, in the greater proportion of instances, appear only after continued use of the drug for a longer or shorter period of time. In this latter respect they differ from the exanthemata which belong to the third group of the same class. They are most commonly seen after the use of iodine and bromine preparations, less often after the administration of arsenic. A bullous form of eruption has also been observed to develop after the use of iodine and bromine. In many of such cases, however, the bullæ are not of the same nature as those of pemphigus, which latter consist in elevation of the epidermis by reason of serous exudation underneath the same, being situated upon a non-inflammatory base, while the former are merely gigantic pustules caused by the excessive development of acne pustules, and having a similar pathogenesis. The true pemphigoid eruption which follows the use of iodine and bromine belongs to the third group of medicinal rashes. The pustular eruption due to arsenic is very rare. The pathogenesis of this group of eruptions is made clear by the demonstration of the presence of the drugs at fault in the contents of the pustular lesions of the skin. The fact that arsenic may be eliminated by the skin, and the similarity in appearance and behavior of the acne due to its use to the acne caused by iodine and bromine suggest that it is of a like nature.

(*c*.) Eruptions caused by the dynamic action of drugs. These often extend over a large extent of the body, are acute in their course, and in many cases are ushered in by a chill, and are accompanied by febrile symptoms and gastric disturbances. As a rule they appear a few hours after the administration of the drug, but never until absorption of the same has taken place, possessing, so to speak, a period of incubation. For the production of this group of eruptions it is immaterial whether the drug at fault be introduced into the system by way of the stomach, by absorption through the mucous membranes of the rectum or vagina, by subcutaneous injection, or by contact with the surface of a wound. Their forms are varied, being determined by the idiosyncrasy of the individual, the same drug always producing the same form of cutaneous lesion in the same person. The varieties of this group of medicinal exanthemata are: —

(1.) Erythema hyperæmicum, which consists in hyperæmic maculæ upon the body and extremities. It disappears upon pressure, is, as a rule, unaccompanied by febrile symptoms, is of short duration, and not followed by desquamation. It is produced by quinine, opium, morphia, oil of turpentine, most commonly, however, by cubebs and copaiba.

(2.) Urticaria medicamentosa. This is the most frequent of the medicinal eruptions, and is very apt to be combined with other forms of cutaneous lesions due to the same cause. It has been observed after the use of copaiba, opium, morphia, chloral hydrate, quinine, carbolic acid, iron, bromide of potash, arsenic, and salicylic acid.

(3.) Dermatitis medicamentosa diffusa. This is a widely-spread cutaneous inflammation, apt to be preceded by a chill, and to be accompanied by fever, headache, and vomiting. It is followed by desquamation, is not unfrequently combined with other forms of eruption, and has been seen after administration of quinine, chloral hydrate, opium, arsenic, iodide of potash, digitalis, iodide of mercury, calomel, and pilocarpine.

[1] Lehrbuch der Hautkrankheiten. Dr. Gustav Behrend. Zweite Auflage. Berlin, 1883. Verlag von August Hirschwald.

(4.) Erythema exudativum medicamentosum. A papular form of erythema has been seen to follow the use of arsenic, quinine, and copaiba, being combined, in two instances, with a diffuse form of dermatitis.

(5.) Vesicular eruptions. These are very likely often eczematous in character, and most of the observations with regard to them are incomplete. Instances have been reported after the use of cannabis indica, bromide, and iodide of potash. One case of eczema which was clearly proved to be due to the action of iodide of potash, when given internally, has been observed by Petitjean.

(6.) Bullous (pemphigoid) eruptions. This has been caused by the ingestion of iodine and bromine preparations, and is accompanied by vomiting and febrile symptoms, and ushered in by a chill. One instance has been reported as having been caused by phosphoric acid, and another case, combined with urticaria, as following the use of copaiba.

(7.) Purpura medicamentosa. This form is not uncommon, appears upon the lower part of the abdomen and upon the legs, is unaccompanied by fever or subjective symptoms, and differs in no way except as to causation from ordinary purpura. It has been caused by the action of iodide of potash, salicylic acid, quinine, and chloral hydrate.

The first and third groups of these medicinal exanthemata are of acute development, and run a rapid course, while the second group is chronic in character. All, however, are aggravated by continuation of or increase in the dose of the drug which causes them, and disappear upon its disuse. The pathogenesis of the third group is much more difficult of comprehension than that of the other two, being entirely independent of the physiological or therapeutical action of the drug used, and at the same time not being due to cutaneous elimination of the same. The author, therefore, speaks of a dynamic action of drugs as causing the development of the eruptions which belong to the last group. In his opinion they are not caused by the drug itself, but are to be ascribed to the agency of a foreign material, of probably chemical nature, which is generated in the blood by reason of the presence of the drug in the system. This means nothing more than that this foreign material is an indefinite something caused by the indefinite action of a definite drug upon a definite individual. With this third variety of medicinal rashes are grouped (1) eruptions which appear after the use of certain articles of food and drink, the type of which is the ordinary "urticaria ab ingestis"; (2) eruptions due to the absorption of wound secretions, and which may be erythematous, urticarial, vesicular, or bullous in character.

II. Exanthemata vaccinalia. A notice of this class of eruptions was included in a previous report on dermatology.[1]

III. Exanthemata menstrualia. It is on account of the clinical analogy existing between them that these exanthemata are placed under the same head as the medicinal and vaccinal skin eruptions, there being no evidence that they are due to any changes in the condition of the blood. They consist in varied forms of eruption which accompany the performance of the menstrual function, the same individual always manifesting the same form of eruption, and disappear upon its completion. Sometimes they are dependent upon pathological conditions of the genital apparatus, oftentimes they are connected with perfectly normal menstruation, and sometimes they are vicarious in character, taking the place of the menstrual act, for a longer or shorter period of time, to disappear when the catamenial function has become reëstablished. Their pathogenesis is obscure, and, as usual in such cases, responsibility for their development has been thrown upon the nerves, which, however, is not a satisfactory solution of the question. Behrend looks rather vaguely for their causation in "certain general, undetermined changes which take place in the female organism at the time of menstruation."

[1] Boston Medical and Surgical Journal, April 27, 1882.

ÆTIOLOGY OF ERYSIPELAS.[2]

In specimens of skin taken from thirteen cases of erysipelas Fehleisen was able to demonstrate in each the same form of micrococcus arranged in rows. These were always to be found in the lymph vessels, sometimes also in the lymph cavities (lymphspalten) and juice canals (saftkanälchen) of the skin, but never in the blood-vessels. The observations of the author correspond entirely in this respect with those of Koch.[3] The author's attempts to obtain cultivation of these organisms outside of the body by using the contents of freshly opened erysipelas vesicles were futile. Success was finally attained by taking freshly excised bits of erysipelatous skin, and placing them immediately in warmed infusion of meat and gelatine, then allowing this to stiffen, and preserving it at a temperature of 20° C. In two days were to be seen upon the cut surfaces of these bits of skin minute white points, which gradually increased in size. These, when inoculated upon other gelatine preparations, presented entirely characteristic development, forming white masses (Rasen), which lined the punctures of inoculation, and slowly developed, reaching maturity in about six days. The microscope showed them to be composed exclusively of the characteristic micrococcus of erysipelas, arranged in rows.

It only remained to demonstrate the fact that these cultivated organisms were capable, when inoculated upon animals or man, of causing true erysipelas. Seven rabbits were inoculated with the same upon the tips of the ears. Of these seven rabbits six developed, with elevation of temperature, a well-marked, sharply bordered, and wandering redness, characteristic erysipelas. In one case the affected ear was amputated, and the lymph vessels of the same were found to be filled with the peculiar micrococcus, exactly as in erysipelas of the human subject. The author furthermore, by inoculation of the same cultivated micrococcus upon human beings, in six instances succeeded in causing undoubted erysipelas, ushered in by a chill, accompanied by high fever, and spreading over a greater or less extent of skin. He is of the opinion that the transmission of erysipelas from man to man belongs to the exceptions, and that, as a rule, the micrococcus peculiar to the disease being capable of existing and multiplying outside of the body, the wound infection which causes erysipelas is, so to speak, accidental. In this connection it is worthy of notice that attempts at cultivation of this organism, under ordinary temperatures, and upon the cut surface of potatoes, were successful. Exposure of these micrococci for forty-five seconds to the action of a three per

[2] Theodor Fisher. Centralblatt für klinische Medicin, 1883, No. 11, page 183. Berlin.

[3] Mittheil. aus. d. k. Ges.-Amt., Bd. 1.

cent. solution of carbolic acid, and for fifteen seconds to the action of a one tenth of one per cent. solution of corrosive sublimate, rendered them sterile, incapable of cultivation in gelatine.

XERODERMA PIGMENTOSUM AND ITS RELATION TO EPITHELIAL CANCER.[1]

At a meeting of the Association of Physicians in Vienna Kaposi showed an example of a rare disease, to which he has given the name of xeroderma pigmentosum. He has met with but eight cases of the malady. All the patients were young persons, of from two to seventeen years of age. Of these five were females and three males, and included in the eight cases were two pairs of brothers and sisters. The disease always showed itself as congenital or at least beginning in the earliest infancy, and is characterized by the appearance upon the skin of numerous pigmented spots, resembling freckles, yellowish-brown in color, and of sizes varying from that of a pin's head to that of a pea. These were situated upon the face, neck, upper part of the body, and upon the arms and backs of the hands. In the course of years many of these maculæ disappear, leaving behind white, cicatricial, and glistening spots, points, and bands. In regions of the skin also, not previously discolored appear signs of atrophy, the epidermis becoming thin, dry, wrinkled like parchment, and desquamating freely. The corium, by reason of the disappearance of the papillary layer, is attenuated, shrunken, and contracted, from which ensue ectropion of the eyelids, narrowing of the openings of the nose and mouth, and permanent bending of the fingers. The skin is still capable of being pinched up between the fingers, but, as a rule, is dry, and deficient in hair and glands, its sensitiveness, however, being unimpaired.

Eventually the disease becomes complicated by the acute development of epithelial carcinoma in various regions of the face, so that within a few months as many as ten or fifteen epithelial nodules may make their appearance. These progress with quickly destructive ulceration and continual recurrences to a fatal termination of the malady. Kaposi is of the opinion that the cause of this peculiar development of carcinoma in connection with xeroderma pigmentosum is to be looked for in the disturbance of equilibrium in the rate and proportion of growth between the papillary layer of the skin, the epidermis, and the pigment. An analogous rapid evolution of carcinoma is often seen in cicatrices and pigmented warts, which present somewhat similar conditions.

MEDICATED GELATINE IN THE TREATMENT OF DISEASES OF THE SKIN.[2]

Pick uses gelatine dissolved in water as a vehicle for the application of various drugs to the skin. The advantages of this method of application, if it proves to be practicable, are obvious, the gelatine forming a thin, flexible film, which adheres quite closely to the skin, and exerts at the same time gentle pressure thereupon. The formula for the preparation is one part of pure gelatine dissolved, with the aid of heat, in two parts of distilled water. When the gelatine has been dissolved the drug to be used is added in the desired amount, with gentle and continuous stirring. The mixture is then set aside to harden, and forms a tough, consistent jelly. Bits of this are melted in a vessel which is placed in hot water, and the resulting fluid is painted upon the skin. A thin coating of medicated gelatine is thus formed, which, when dry, should be brushed over with a trace of glycerine in order to give it flexibility. If the edges of the patch of gelatine show a tendency to roll up they may be confined by the application of flexible collodion. The author has applied with success, in the treatment of psoriasis, gelatine preparations containing ten per cent. of crysarobin, or from ten to twenty per cent. of pyrogallic acid. For the treatment of chronic, scaly eczema, and the erythematous condition due to the action of cold, gelatine containing from five to ten per cent. of salicylic acid has been applied with advantage, particularly in frost-bites of the ears, nose, and fingers, where the layer of gelatine exerts an equable and gentle pressure upon the parts, and in this way hastens the absorption of inflammatory products. Noteworthy but only palliative relief of symptomatic as well as idiopathic pruritus of the skin is obtained by painting over the affected regions a preparation of carbolized or salicylicized gelatine containing ten per cent. of the drug. The itching disappears immediately upon application of the medicated gelatine to reappear upon its removal.

[1] Medezinische Jahrbücher, 1882, 2 Heft, page 139.
[2] Monatshefte für Praktische Derm., Band ii., No. 2, 1883.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

APRIL 9, 1883. DR. CHARLES D. HOMANS presided.

DR. CLARENCE J. BLAKE read a paper on

ACCUMULATIONS OF EPIDERMIS IN THE EXTERNAL AUDITORY CANAL.

DR. J. ORNE GREEN said that this new explanation of Dr. Blake's seemed to account for almost all the cases, but not quite all. In some cases he thought inflammation must be the cause. He spoke of such a case reported by him to this Society, in which the accumulation was confined to the lower wall of the meatus. It was the only case of circumscribed inflammatory exudation that he had ever seen.

Dissolving with caustic potash the lardaceous epidermis that had suffered fatty degeneration had never occurred to him, but he saw no objection to it, unless that it might be hard to get out the lost pieces. That had been already explained by Dr. Blake. He had commonly used forceps and probe, working up under the epidermis until he could get hold of it. The meatus is sometimes so sensitive that he has used ether. Separation is slow and vexatious, exposing the operator to unfavorable comment if the patient supposes he only has cerumen to deal with. He had seen carious bone resulting from the pressure, and he reported two cases.

In one the meatus was full of the mass, and its removal showed a raw inflamed meatus with a spot of bare carious bone, two or three by one or two lines in extent. This was scraped, and healed in some weeks. Six years later the patient presented himself with the meatus filled with cerumen, only there being now no caries.

In the other case a mass three quarters of an inch

long and as large as the little finger was removed. The meatus was dilated and the bone was exposed, but was not soft. It is now covering up. In such cases the life of a patient may be endangered if the mass remains in by its obstructing the exit of pus.

Dr. Green also spoke of a class of cases in which a mass extends though the tympanum from within, sometimes giving serious trouble and always hard to get out.

DR. WHITE asked, if the cause is merely imflammation, how does the removal of the mass of epidermis cure the disease?

DR. BLAKE answered that he had spoken in his paper of cases where the mass is caused by mechanical plugging, and it may act as a foreign body, giving rise to pain and deafness, especially when some additional inflammation occurs as the result perhaps of a cold. Removal of the mass cures inflammation depending on it. More obstinate cases occur; there may have been furuncles at first or other causes. Even then removal of the mass is often all that is needed. Sometimes, however, after-treatment is necessary.

DR. WHITE asked if these masses ever result in epithelioma, as sometimes is the case under somewhat similar conditions in the external skin.

DR. BLAKE answered that he did not know of any such result.

DR. GREEN said that he agreed with Dr. Blake as to these cases generally getting well on the removal of the mass; where they do not, he has been for two years in the habit of painting the inflamed meatus with ninety-eight per cent. alcohol, blowing it at first to relieve the pain. If there is suppuration he paints with a solution of boracic acid in alcohol, which evaporates leaving a thin film of boracic acid. He said, in answer to Dr. White's question, that he thought there were no cases on record of epithelioma having its origin in these impacted epithelial masses of the meatus, but in the tympanic cavity and mastoid cells exactly similar masses were found due to desquamative inflammation, which masses closely resembled if they were not exactly similar to cholesteatoma.

DR. WELLINGTON said that the reader had spoken of washing badly, and asked what he considered washing properly.

DR. BLAKE quoted Sir William Wilde that nothing should be put into the ear smaller than the point of of the elbow. The aurilaves of the shops are very injurious. Washing the outside of the ear is sufficient for decency. In babies, the parts being soft and the secretion of the canal free, the movement of the jaw seems to roll up the cerumen into little balls, which we can see fall out.

DR. WHITE asked if most people do not wash a lifetime without any trouble.

DR. BLAKE said that it is perfectly possible.

DR. WELLINGTON said that he supposed it was a common habit to wash, and had asked if he should understand the reader that it is better not to do so.

DR. BLAKE said it is usually a matter of experience. He commonly finds in these cases that it is a practice to use a finger or a rolled up towel for cleaning the ear, and he warns such patients to give up the habit. Many people can clean their ears in this way without harm, perhaps most people, but now and then, with a large meatus, a small finger, or a free secretion, it leads to trouble.

DR. WHITE, in answer to Dr. Blake, said that the external skin has directions of growth, such as he had described in the external meatus, in the embryo, but not, so far as he knew, in the adult.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

THURSDAY EVENING, APRIL 12TH. DR. M. O'HARA in the chair.

DR. C. M. WILSON presented the following specimens, the notes of which will appear in some future issue, owing to the author's failure to forward the papers to the recorder: Case of invagination of the ileum; case of large vesical calculus; case of multiple vesical calculi.

DR. GUY HINSDALE presented three aneurisms and a specimen of fracture of the base of the skull.

CASE I. ANEURISM OF THE ARCH OF THE AORTA.

William G., a fireman, aged forty-four, was admitted to the Episcopal Hospital September 16, 1881, suffering from pneumonia of the right side, associated with signs of pleurisy. It was noticed at the time of his admission that there was a slight diastolic murmur heard at the aortic cartilage, and that no radial or ulnar pulse could be felt upon the left side.

The pneumonia pursued its course until it ended in death on the eleventh day after admission. Eighteen hours before death occurred, however, after an attack of severe pain along the course of the sciatic nerve, he suddenly became unconscious and his respiration puffing. His pupils were contracted, and his left arm rigid. His pulse became at once fuller and stronger than it had been since admission, there being ninety-six beats per minute. Fifteen hours before death the right side of the face was paralyzed. The radial pulse was smaller on the right side than on the left. The right foot was cold and the posterior tibial pulse behind the internal malleolus was just perceptible. Respirations were forty per minute and stertorous, sweat and urine profuse. Twelve hours before death, respirations 57, temperature 106.2° F.

The patient remained essentially in this condition until his death. At the post-mortem examination, upon opening the thoracic cavity, the base of the right lung was found in the second stage of pneumonia. There was hypostatic congestion of the left lung. But what at once threw light upon the later features of the case was the presence of an aneurism of the transverse portion of the arch of the aorta. The specimen shows a symmetrical dilatation of the vessel capable of receiving a large hen's egg. On examining the brain, clots, probably of embolic origin, were found in the right cerebral hemisphere, thus accounting for the paralysis which had been observed.

CASE II. ANEURISM OF THE COMMON AND EXTERNAL ILIAC ARTERIES.

Johann B., a farmer, aged twenty-six, was admitted to the Episcopal Hospital October 27, 1882. His previous health was good. He denied specific history, and his habits were good. He was able to work until one week previous to admission, when he began to have pain in the feet and legs shooting up the body to the head. His skin was yellowish, his tongue coated; his urine did not contain albumen. There was œdema of

the feet, and it is worthy of note that this had occurred on the right side four months before admission. His spleen was apparently enlarged; his lungs presented nothing abnormal. Systolic and diastolic murmurs could be distinctly heard all over the cardiac area, but most clearly at the right second cartilage and transmitted over the left subclavian and carotid vessels. The heart was considerably hypertrophied.

Six weeks later the attacks of pain in the right thigh, and side to which he had been subject ever since admission, became more frequent and severe. The murmurs at the aortic valve were systolic and diastolic, low, soft, and confused. A distinct thrill was now felt; heart's impulse quick and trembling.

About one week before death a swelling occurred in the right parotid region, extending to the cheek and lower jaw. Subsequently a thin and purulent discharge took place from the ear, and the patient became unable to protrude his tongue. The œdema of the right leg returned and increased daily, extending up to the body, the whole leg being about three times the bulk of the other. The aneurism grew with great rapidity; the distention of the vessel and the overlying structures gave rise to the greatest pain. The patient was unable to lie down and was always found in the sitting posture. The mind was clear up to the day of his death, which occurred two months after admission.

At the autopsy, upon opening the abdomen, the aneurism was found very prominent, occupying the right side of the abdominal cavity and extending from the concavity of the liver to Poupart's ligament, a distance of about nine inches. The aorta bifurcated at the upper border of the fourth lumbar vertebra, the tumor arising from the common iliac artery one inch from the aorta. Its whole anterior surface was covered by peritonæum. The right kidney was elevated, lying upon the tumor's upper surface, the ureter passing over the convexity of the tumor and to the inner side. The psoas muscle and crural nerves were displaced and stretched to the outer side of the aneurism. The femoral artery emerged from the tumor one inch above the origin of the profunda.

Upon opening the sac a second sac was found within. No rupture had taken place. The cavities of both sacs were found filled with clots in various stages of organization. The walls were leathery, and large flaps of organizing clots were found attached to them. There were also post-mortem coagulations.

The line of the blood current could be determined by the passage of a catheter. This was found both from above and below to skirt the inner side of the tumor and to pass through a comparatively short channel in its interior. Three of the bodies of the lumbar vertebræ were slightly eroded. The heart is hypertrophied; its weight fifteen ounces. The mitral valve is normal, but the aortic valve shows exuberant vegetations which impede its action and which are very friable.

The specimen presented embraces the heart, the aorta, the aneurism with the right kidney upon its upper surface, the right femoral and the left iliac arteries.

CASE III. ANEURISM OF THE ABDOMINAL AORTA AND LEFT COMMON AND EXTERNAL ILIACS.

Mary K., aged thirty, was admitted to the Episcopal Hospital August 26, 1882. Her mother died in confinement, and her father, of heart disease. She had had three children; her husband was a bar-tender, and had been treated for syphilis at a dispensary; but the patient herself denied specific history, nor were any evidences of it found. She had never been ill before.

Seven months previously she had pains in her left groin; these pains extended to the abdomen, and about five months previous to admission she noticed a small tumor in the hypogastrium which pulsated and became painful on pressure. Three months later her strength began to fail; she became delicate and lost flesh. For one month the tumor had been prominent. Pain then came on spontaneously at intervals, and she had backache. She became weak and took to her bed. Two weeks before admission the left leg and thigh became painful and felt benumbed, and motion grew difficult, and for a time was lost. Meanwhile the tumor increased.

Upon admission she was weak. Her face showed anxiety and suffering and had a haggard and pinched look. The organs of digestion were not interfered with. Her lungs and heart were normal. On the right side of the abdomen a tumor was felt one inch above the umbilicus and extending from one inch to two and one half inches from the median line, downwards two inches. It was painful on pressure, pulsated distinctly, and over it a distinct systolic bruit could be heard. A distinct notch separated this from a large hard mass in the left iliac fossa, indistinctly pulsating, immovable, and not particularly painful on pressure. There was a faint bruit.

In the left thigh there was insensibility to touch over the distribution of the anterior crural nerve, while pain in the left knee was often so great as to deprive her of sleep.

The urine did not contain albumen.

At the end of two weeks sensation was diminished on the left side as high as the edge of the ribs and in the whole of the lower extremity, excepting the first and second toes; it was impaired over the buttock. Œdema of both legs occurred. The posterior tibial on the left side could scarcely be felt to pulsate.

September 13th the patient suddenly died. At the autopsy the abdomen was first opened. There was no blood in that cavity. Upon the left side in the iliac fossa there was a prominent tumor of the size of a cocoanut; over it lay the psoas muscle, which was spread out in the shape of a thin aponeurosis. The iliacus muscle was displaced. The psoas parvus was inserted in the tissue covering the tumor.

A fusiform dilatation of the aorta was then noted. The diameter of the aneurism was three times the normal diameter of the aorta. Commencing from a point seven inches above the bifurcation, it extended downward nearly five inches.

A second aneurism occupied the left iliac fossa, involving the left common and external iliac arteries. It was about six inches in length and was filled with old fibrous, laminated clots. The latter aneurism had opened posteriorly behind the peritonæum and against the iliac bone. There had evidently been ruptures previous to the one which finally caused the patient's death.

There were found old as well as recent clots outside the aneurismal walls. There was no erosion of the bones. The femoral artery was normal, and no atheroma or evidences of syphilis observed, although the woman had been exposed to infection from a syphilitic husband.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

THE EFFECT OF NOISE ON HEALTHY AND DISEASED EARS.

AT a meeting of the County Society, held April 23d, DR. D. B. ST. JOHN ROOSA read a paper on the above subject. He commenced by speaking of the passage in the work of Thomas Willis, published in Amsterdam two hundred years ago, in which he mentions the case of a woman who could only hear in the midst of a great noise, and whose husband, in consequence, hired a drummer as a household servant. While the drum was beating she could hear ordinary conversation with ease, but at other times her deafness was exceedingly marked. Dr. Roosa remarked that the passage was very often alluded to, but seldom quoted, and he therefore read it in full. It also referred to another case in which a person living near a bell tower could hear such conversation only when the bells were ringing. Willis explained this phenomenon by the hypothesis that the membrana tympani was habitually relaxed when left to itself, but was forced to a state of tension by very loud sounds. Many authorities had admitted the correctness of Willis's observations, but had rejected his explanation of the facts observed. Various theories had been suggested to account for these, but it was doubtful whether there was even yet any unanimity of opinion among the profession in regard to the matter. Wilde admitted the credibility of Willis's witnesses, and, believing also that the phenomenon was due to the state of the membrana tympani, stated that it did not occur when the membrane was absent or perforated. Trolch, on the other hand, contended that the ability of deaf persons to hear better in a noise was founded, as a rule, on incorrectness of observation and self-deception on the part of the patient. Dr. Roosa could not agree with Trolch that it was not of frequent occurrence. Other authorities attributed the phenomenon to a torpid condition of the auditory nerve. Burnett acknowledged the condition to be a well-established fact, but believed it to be confined to those suffering from chronic catarrh of the middle ear. Holt, of Portland, Maine, said in his paper read before the American Otological Association in 1882, that he doubted whether in any cases whatever the hearing was really improved by surrounding noise, claiming that no sufficiently careful observations had ever been made on the subject. Dr. Roosa took exception to this statement, and remarked that in all of the editions of his book on the ear he had related the case of a mail agent who could hear very much better when in a railway car in motion than elsewhere. He had had frequent opportunities to study the case, and there could be no possible doubt of the facts. The patient, who was a gentleman of great intelligence, had been obliged to give up the legal profession on account of deafness, and though he could hear so well while traveling on the railroad, the moment he reached a quiet place his deafness returned. Politzer had no doubt as to the existence of the condition, but stated that he had noticed it almost exclusively in incurable disease of the middle ear. Dr. Roosa, however, had observed it in at least two cases which had afterwards recovered. Probably the reason that it had not been noticed in acute cases was that patients with acute disease were apt to remain as quiet as possible on account of the pain which they suffered, and very rarely traveled on railroads. He did not doubt that in many cases of acute trouble, in which both ears were affected alike, the phenomenon would be observed if the patients were to go in a railway train. He had also met with two cases (the only ones, he believed, which had ever been reported) in which the membrana tympani had been entirely destroyed, and yet who could hear much better when in the midst of noise. These cases, one of which was mentioned in the fourth edition of his book, certainly proved the incorrectness of the explanations offered by Willis and Wilde. He believed, however, that the condition was never found unless there was disease of the middle ear, and that it never occurred when the auditory nerve was not in a healthy condition. Politzer had suggested that it depended on the condition of the ossicles, and this theory, incompletely established as it still was, was the only one which offered a satisfactory explanation of the above cases.

The statement that these cases of hearing better in a noise were founded on inexact observation, he continued, could readily be disproved by riding for a few miles in a railway car or over a rough country road with persons affected with disease of the middle ear, and he had himself often resorted to this means. He knew well a distinguished man who was extremely deaf under ordinary circumstances, and yet who could hear with exceeding ease when riding thus. The examination of boiler makers and those suffering from disease of the auditory nerve in this connection had only led to confusion. Dr. Roosa next related the case of a gentleman now practicing medicine in New York. When a boy at school he had been treated for catarrh of the middle ear by Politzer's method, and for several years before he was sixteen he had suffered from deafness, which seemed attributable to acute catarrh of the middle ear complicating chronic pharyngeal catarrh. When riding in a carriage over the city pavements he could hear perfectly, but at other times was very deaf, so that conversation in a quiet room was quite unintelligible to him. This was one of the cases which had completely recovered, and the other, which was very similar, had occurred in a student seventeen years old.

Although the two subjects were often confused, the improvement of the hearing of the deaf in the midst of noise and the effect of noisy occupations, such as that of the boiler maker, were two very different matters. He did not know of any cases in which persons had been rendered deaf by the noise met with in railway traveling, but in boiler makers he believed there was a lesion of the acoustic nerve. Those engaged in this occupation, it had been proved, by no means heard better in a noise, but experienced a sense of relief when in a quiet place. He had formerly assumed that they did hear better in a noise, but Dr. Holt, in his paper, denied the correctness of this conclusion, and was also inclined to attribute the phenomenon of improved hearing in a noise to disease of the middle ear. Since then he had instituted a new series of observations in connection with Dr. J. B. Emerson, which seemed to show conclusively that boiler makers suffered from disease of the internal ear, and that they did not hear better in a noise. It was easy to demonstrate that the deafness of boiler makers and others engaged in similar occupations was distinctly due to disease of the labyrinth. So badly did they hear in the shops that they often resorted to a language of

signs to communicate with each other. On the other hand, an individual with disease of the middle ear, who heard well in a railroad train, would hear much better in a boiler shop than either those habitually employed there or than those whose hearing apparatus was in the normal condition. A patient of his own, a lady of thirty-five, who could not hear an ordinary ticking watch at all, had tried the experiment of going into a boiler shop, and found that while there she could distinctly hear her husband talking in quite a low tone of voice, while the latter could not hear a word she said unless she placed her mouth to his ear and shouted. The fact that many of the deaf heard better when on the cars had often been explained on the supposition that louder tones of voice were naturally used there on account of the noise of the train, but this explanation was certainly not the correct one, since he had proved again and again that it was not necessary to elevate the voice at all in order that such persons might hear distinctly while in the cars.

Dr. Roosa then went on to show how it was possible, as he claimed, to make a diagnosis between disease of the middle and internal ear by means of the tuning-fork. It was a well-known fact that persons with healthy ears heard the tuning-fork C more distinctly and for a longer period of time through the air than through the bones of the head (by bone-conduction as it was called). He had found, however, that those suffering from disease of the middle ear heard the tuning-fork C better by bone-conduction. On the other hand, those who had disease of the acoustic nerve, although their appreciation of the sound was, of course, diminished, heard it more distinctly and longer through the air than by bone-conduction. His cases of boiler makers' deafness, he said, depended on this theory that where, among the deaf, the tuning-fork was heard better through the air than through the bones, there was disease of the internal rather than the middle ear. Dr. Holt, in the paper before alluded to, laid considerable stress on the appearances of the membrana tympani in boiler makers' deafness, but, as regards the matter of diagnosis, he said he paid no attention whatever to this point so long as the tuning-fork test could be made. There was an acoustic neuritis, he thought, which corresponded exactly in character with optic neuritis. He considered it a perfectly well-established point that many persons with disease of the middle ear heard better in a noise, and he had always found the statements of intelligent patients to be entirely trustworthy in this particular, so that he had yet to meet with a single one who was mistaken in a deliberate assertion that he heard better in a noise. It was very common for an individual who ordinarily could only hear the voice at a distance of one foot, and that with difficulty, to hear the same at twenty feet with ease when on a railway train.

Dr. Roosa said he had collected a large number of cases of boiler makers' deafness, which he would soon publish; but he only referred to two or three of them on this occasion. One was that of a man of thirty-five, who for twenty years had been engaged in the trade. He had gradually grown deaf, and now could not hear a lecture or sermon. The tuning-fork C he could hear for twenty seconds through the air, but only nine seconds through the bones. Another man could hear the sound twenty-one seconds through the air, but only eight seconds through the bones. Two of the cases, he added, had impacted cerumen in the external ear, which masked the disease of the internal ear; and these, he thought, offered a strong confirmation of the correctness of his position in the matter of diagnosis, since as long as the wax remained the men could hear the tuning-fork better by bone-conduction than through the air, while after it had been removed the reverse of this was true.

The results of Dr. Roosa's experiments he summed up somewhat as follows: —

(1.) A large class of persons suffering from deafness can hear quite distinctly when in a noise.

(2.) When this is the case the disease is situated in the middle ear. The disease is usually of a chronic, non-suppurative character; but the same phenomenon is also noticed sometimes in acute and subacute affections of the middle ear.

(3.) The proximate cause of this is not yet definitely determined, but it is believed to depend on the condition of the ossicles.

(4.) Boiler makers' deafness is of an altogether different character from the above.

(5.) The latter is believed to be due to disease of the labyrinth or the trunk of the acoustic nerve.

(6.) Those suffering from boiler makers' deafness do not hear better in a noise.

(7.) Cases of impacted cerumen and other affections of the external and middle ear occur in boiler makers as well as in other individuals.

(8.) In disease of the labyrinth the tuning-fork C is heard louder and longer through the air than through the bones of the head.

Dr. Knapp said that so few observations had as yet been made in regard to the matters spoken of in the paper that the questions discussed must for the present be admitted to be still unsettled. So far as his own observations went he was inclined to give assent to the statements of Dr. Roosa, although he could not entirely agree with him in regard to the diagnosis by means of the tuning-fork between disease of the internal and middle ear.

Dr. Brandeis remarked that what experiments he had made with boiler makers in the main confirmed the conclusions of Dr. Roosa, although he had often found it difficult to determine how far disease of the nerve and how far affections of the conducting apparatus were concerned in the causation of the deafness. Naso-pharyngeal and Eustachian catarrh were present in all the cases he had seen, and were often, he believed, the principal factor in causing the difficulty of hearing. To such patients he was in the habit of recommending the use of the respirator, and also the ordinary ear-lapel, in the place of cotton-wool inserted into the meatus. Boiler makers were either apt to stuff in a large wad of cotton, which increased arterial pressure and the tinnitus aurium to which they were subject, or else use too small a quantity, which was liable to collect particles of iron and dust, and thus act as an irritant foreign body. He also said, in conclusion, that he had found a unilateral impairment of hearing among musicians, and more particularly among violinists. They were apt to be deaf on the left side, and he was disposed to attribute the condition, in part at least, to the position in which the head was held so much of the time, which tended to interfere with the circulation of the auditory apparatus.

Dr. O. D. Pomeroy said that he was inclined to lay more stress on the observations of Holt than the reader of the paper had done, and there seemed to

him to be no question that in a large number of cases of boiler makers' deafness there was disease of the middle ear. In many instances, he thought, the appearance of the membrana tympani showed that there was a chronic inflammation of this part. That such was the fact was not to be wondered at, since boiler makers, like locomotive engineers, were peculiarly exposed to catarrhal influences, and he believed that catarrh was really present in a large number of cases. In the diagnosis of these cases there was much difficulty in determining how much trouble there was in the middle ear and how much in the labyrinth. It was his own conviction that the affection really commenced in the middle ear and afterwards extended to the internal ear. Inflammation of the former could not exist very long, he thought, without affecting the labyrinth also. All observations with the tuning-fork were to be taken as yet with great allowance, as it was a subject that required the most minute investigation to enable us to judge properly of the value of the method. He believed that Dr. Roosa was mistaken in some of his statements, and would have preferred that he should have said that where there was disease of the internal ear the difference between aerial and bone-conduction was not as great as in the normal ear. There were so many exceptions to the rules laid down as the results of observation with the tuning-fork that such experiments were not of as much practical value as they would have been if this were not the case. He had found that boiler makers heard the tuning-fork better in the worse ear.

After remarks by one or two other speakers, DR. ROOSA brought the discussion to a close. It was now the fashion of the day, he said, to almost always blow up the ear after the method of Politzer; but he believed that if there were acoustic neuritis this practice did a great deal more harm than good. As to Dr. Pomeroy's statement that boiler makers heard the tuning-fork better in the worse ear, it was very seldom indeed that there was any difference between the two ears. It was true that this class of men sometimes suffered from catarrh of the middle ear, but this was simply because they were liable to this affection in the same way that any one else was. The *distinctive* characteristic of boiler makers' deafness, however, was disease of the labyrinth, and the affection did not exist without this. He claimed to be the pioneer in making the diagnosis between disease of the middle and internal ear from a clinical point of view, and whereas Dr. Pomeroy thought it was impossible thus to differentiate between the two, he held that it could now be done.

Recent Literature.

Diagnosis of Ovarian Cysts by Means of the Examination of their Contents. By HENRY J. GARRIGUES, M. D. New York: William Wood & Co. 1882. 112 pages.

This book gives a résumé, collected from scattered journal-articles, of what is known in regard to ovarian and allied fluids, together with the opinions of various writers upon the value of examination of ovarian fluids for diagnostic purposes.

The author's own deductions are based on ninety-seven cases, the fluids having been taken from ovarian cysts or from cysts in the neighborhood such as might be confounded with ovarian tumors.

The conclusions as to the diagnostic value of an examination of a tapped fluid occupy a mid-ground between the views entertained by agnostics on the one hand, and by those authors, on the other, who maintain that ovarian fluids can be diagnosticated as such with certainty.

The writer enters into a consideration of the physical, chemical, and morphological characters of various fluids, and while thinking that none, except ecchinococcus cysts, contain elements which are pathognomonic, still believes that the combination of such characters, taken in connection, if necessary, with the clinical aspect, gives in most cases a positive diagnosis, especially as far as ovarian cysts are concerned.

Dr. Garrigues deserves credit for his labor in bringing together in a collected form material which has previously been inaccessible to most readers; further, the results of his own work are of value.

His descriptions of the morphological elements found in fluids are good, though one cannot always agree with him in his explanations of the pathological processes by which such elements have arisen.

The value of the presence or absence of paralbumin is so slightingly spoken of that one can only believe that the imperfect acetic acid test mentioned has been relied upon, and not Eichwald's more laborious method of precipitation with absolute alcohol, etc., etc.

In reading page 84 one is surprised that an experienced worker with the microscope should not have recognized the rhomboid and acicular crystals as hæmatoidin and bilirubin.

The book is well worthy of a perusal, and the numerous and well-executed wood-cuts aid much in giving one an idea of what is to be seen with the microscope in the examination of ovarian and allied fluids.

Public Document, No 7. *Annual Report of the Adjutant-General of the Commonwealth of Massachusetts, for the year ending December* 31, 1882. Boston, 1883.

This volume contains, besides matters of general military interest, the reports of the Surgeon-General and his subordinates. They discuss the ordinary causes of sickness among the militia during the annual encampment, and while the health of the men was as a rule very good in the various camps last summer, the medical inspectors call attention to the fact that the "sinks" are encroaching to a dangerous proximity to the wells, and urge the building of closely cemented vaults whence the excreta can be completely removed after each encampment. We notice also that one of the directors favors a closer supervision of the diet of the men, with a view to excluding rich food, pastry, etc., while the Surgeon-General thinks that it is unwise to insist upon a rigid dietary. The innate independence of the American citizen is by no means laid aside in militia encampment, and we suspect that in a midsummer holiday he will brook no interference with his inalienable right to doughnuts and pies.

— Dr. Clement A. Walker, for thirty years superintendent of the lunatic asylum at South Boston, died on Friday, April 27th, at the age of sixty-three.

Medical and Surgical Journal.

THURSDAY, MAY 3, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

THE CARE OF INSANE CRIMINALS.

ONE of the important subjects which has come before our Legislature this winter has been that of provision for insane criminals. But as this is an "off" or an "on" year, it is a little difficult to say which, it has been gently cast aside for other legislatures to ponder over with that easy indifference peculiar to our beloved General Court.

When Governor Long recommended separate treatment for insane criminals, and the Board of Health, Lunacy, and Charity was empowered to make a special report on the subject to the Legislature of the succeeding year, we hoped that some definite action might follow; but alas! the usual apathy showed itself. Superintendents and others specially acquainted with the subject failed to put in an appearance when a "hearing" was held, in sufficient numbers to impress the Committee on Public Charitable Institutions with the necessity of a separate institution for the criminal insane, and procrastination was the only result.

Meantime, however, the evil grows, and we now find that there are between 150 and 160 insane criminals in our State lunatic hospitals, twelve of these having been removed from the prisons since January 1st.

Many of this number are depraved and dangerous, and are not only difficult to properly control in an ordinary hospital, but association with them is injurious to those patients coming in contact with them. And it is, therefore, no less than a serious public wrong for the State to *allow* a lunatic hospital, intended for the treatment of her innocent, sick, and suffering citizens, to be so perverted from its high and proper sphere of action as to receive the lowest grade of convicts direct from the State prison. It is fundamentally wrong as well to have a law on our statute book, which legalizes the bringing together of the pure, the upright, and the harmless with the vicious, vile, and dangerous.

While no one will deny that the plan of mixed treatment is wrong in principle, it is sometimes forgotten when the subject is brought up for legislative consideration, and it will do no harm, therefore, to again call attention to it here.

It is a rather curious fact that although the superintendents of various insane hospitals in all parts of the country have been constantly calling attention to the necessity of separate care for insane criminals for the past twenty-five years, only *one* State has as yet made any adequate provision for such treatment.

The smallness of the numbers of the class to be separated was for a long time an argument against separation, but the force of this argument has, of course, lessened as time has gone on, and the necessity of action is at last apparent.

Another source of delay has been the suggestion, and in some States the adoption, of half-way plans of separation. Instances of these plans are separate wards in the hospitals or separate portions of prisons. As a rule these experiments have resulted in partial or complete failure, and probably the future will show no better results. To be sure England treats her convict insane in a department connected with the Invalid Prison at Woking, and puts her unconvicted insane alone together in the asylum at Broadmoor, but the numbers are very large in each institution, and separation from all other persons may be regarded as complete. The subdivision of the criminal insane into the two classes of *convicted* and *unconvicted* is a justifiable one, but warranted only by large numbers, and at present uncalled for in this country, as the same object can be accomplished by other methods.

The plan of treatment which we have been led to regard as the best adapted to the conditions of our own and other States is that of *complete* separation. This plan has now been in operation for more than twenty-four years in the State of New York, and every year demonstrates more and more conclusively its entire success.

We have before us the annual report for 1882 of the New York State Asylum for Insane Criminals (at Auburn, N. Y.), where this experiment has been tried, and are surprised to learn what good results can be arrived at when the criminal insane are treated entirely by themselves, and hence can have every privilege and liberty granted them that the treatment of their disease may require without any risk of exposing a different class of the insane to injury by so doing.

There were at the date of the report 141 patients in the asylum, and this number would be much larger if the period of detention of patients at the asylum was longer, and all of the criminal insane scattered through the State were sent to it. The total number of patients admitted has been 629. Of this number 166 have recovered and 76 died, the showing in each case being rather more favorable than might be expected.

The *unconvicted* numbered 58; the convicted 571. Of the first class, 41 had committed murder; of the second class, 61. Six of the first and 27 of the second class had committed arson. The balance of the *convicted* had committed all sorts and kinds of crimes, chiefly against property.

As may be imagined from these statistics, the asylum population must be made up of patients with bad and dangerous tendencies. Notwithstanding this, however, mechanical restraint had not been used for seven months, and seclusion had been rarely resorted to except to frustrate plots, or for the purpose of watching feigners. In one ward the "open door" system was used during the day.

A large number of patients was reported as working in every department of the asylum, in-doors and

out; the aggregate number of days work being 9784. All articles of clothing and bedding, including shoes, are now made in the asylum.

In connection with the employment of patients the need of an asylum farm is emphasized. This would furnish the best and most complete form of occupation for the patients, and would materially help in supporting the asylum. Large parties of patients were sent out to aid the neighboring farmers, in the absence of an asylum farm, sometimes as many as thirty going at one time.[1]

The conclusion has been arrived at by the Superintendent, Dr. C. F. MacDonald, that though the criminal insane are, when admitted to the asylum, characterized by the most striking evidences of depravity, yet observation and experience have served to convince him "that *with facilities especially adapted to its needs* an asylum for the criminal insane can be conducted on the same general principles, and with as good results, except in the matter of cures, as are hospitals for the ordinary insane."

The principal difficulties experienced in the care of the criminal insane are a propensity of the convicted to escape, and a tendency of both the *convicted* and *unconvicted*, who have committed crimes against the person, to make dangerous assaults.

The weekly per capita cost of patients at the criminal asylum for 1882 was $4.18, which included some items not usually taken into account in other New York asylums, and was therefore not much more than at some of the other asylums. With a larger number of patients, and a profitable farm, the per capita cost would undoubtedly be lower.

The Report of the Superintendent is followed by the "Minutes of Official Visitations and Inspections made by the State Commissioner in Lunacy," Dr. Stephen Smith, an excellent innovation, which we do not remember to have seen before in a New York Lunatic Asylum Report.

The general inference to be drawn from the Report before us, is: that an asylum for the criminal insane can in most ways be built and carried on very much like an ordinary insane hospital, *provided* that there is complete separation from all other institutions; that rules and regulations are adopted especially suited to this class; and that unusual vigilance is observed in the daily care of the patients.

We trust that by another winter our public lawmakers will be made to see the necessity of separating the criminal from the ordinary insane so strongly that they will at last take the steps necessary to accomplish this purpose.

HEREDITARY SYPHILIS AND RICKETS.

The connection between these two diseases has been a fruitful subject for consideration for many years. Certain distinctions have been laid down between them, but there has always been a small number of individuals who have considered rickets but one of the manifestions of congenital syphilis. At a *séance* of the Société de Chirurgie in February last, Parrot of Paris gave expression to his well-known views of the identity of the two diseases. His ideas as given at that meeting are substantially as follows: —

Rickets is the final lesion of the syphilitic germ which has already passed through intermediate steps, and one can establish the relation between the point of departure and the result only by studying a great number of patients of various ages of disease. To demonstrate the existence of hereditary syphilis it is necessary to find proofs outside of the affirmations of parents. The accidents of active disease are passed by, the desquamative syphilide of the tongue alone being mentioned, and the author dwells upon the traces left after the active stage has passed; these are the cutaneous cicatrices and the signs left upon the teeth. The more I see, he said, the more I am convinced that every time that the teeth present these deformities there is a question of hereditary syphilis. These modifications of the teeth are divided into different classes. They may attack all the teeth with the exception of the second and third molars and permanent premolars.

The osseous lesions can be ranged under three principal types which correspond to three successive stages of infancy. These are, in order of succession: first, that of osteophytes; second, gelatiniform atrophy; third, that of spongoid tissue. The evil does not necessarily commence with the first form, but with any one of them according to the age at which it becomes active. The first form is found in the fœtus and during the first two months after birth; after that age it is the second form, and generally after the first year the third (or rachitic) form.

The first two types show themselves always in syphilitics. Is it possible that the third does not recognize as its origin hereditary syphilis when one observes that ninety times at least in the hundred cases of rickets the previous existence of syphilis can be demonstrated? There remain ten cases to explain, but in view of the identity of the lesions and the insufficiency of all other explanations it appears impossible not to refer these ten cases to syphilis. Is it not proper to suppose that the cutaneous lesions have left no traces, or that the osseous system has been alone attacked? In hereditary syphilis, of all the organs, the bones are most frequently attacked in the first as in the last period.

M. Parrot continued by contrasting the simplicity of the views advanced by himself with the contradictory and diverse views of the ætiology of rickets held by different authorities, and closes as follows: —

"Infants, large and fat, belonging to wealthy families, can become rachitic, and children can inhabit dark and damp places, insufficiently clothed, and not become rachitic. All debilitating causes can prepare the ground, but unless the seed is there rachitis will not follow. The necessary germ is hereditary syphilis."

The *Bulletin* of April 10th gives the remarks which followed, which show that the views of M. Parrot did not pass unchallenged.

[1] Minutes of Visitation and Inspection by the State Commissioner in Lunacy.

He was followed by M. Magitot, who did not attempt to discuss the general question, but confined his remarks entirely to the question of the deformities of the teeth considered by M. Parrot as characteristic of hereditary syphilis. In brief the views of M. Magitot are as follows: —

The dental erosion shows itself in subjects absolutely free from all suspicion of syphilis. Infants, unquestionably syphilitic, do not show it. The lesions of the bones are pathological; the erosion of the teeth is an intra-follicular arrest of development of the organ in evolution, or teratological.

The dental erosion in the form considered most characteristic is not confined to man, but is found in certain domestic animals which are never the subjects of syphilis. In addition, he believed that hereditary syphilis was incapable of producing exactly that erosion: the teeth of infantile syphilis are small, atrophied, deformed, profoundly altered in anatomical and chemical constitution but uniformly and generally; the lesion is characterized in two words by Fournier, *amorphisme* and *atrophie*.

M. Després protested in the light of his personal experience against the absolute theory advanced by M. Parrot.

Accustomed as we are to regard Parrot as authority on congenital syphilis, it is not easy to accept his dictum as to the identity of the two diseases. It is not our desire to recall all the arguments on the other side, but we cannot refrain from saying that the observations of Magitot are certainly quite as trustworthy as those to which he is opposed, and decidedly weaken the force of M. Parrot's conclusions.

THE SEA-SHORE HOME.

The Sea-Shore Home at Winthrop, near Boston, is one of those charities which returns to our notice with the advent of warm weather. We are glad annually to draw attention to its affairs, as we believe it worthy of attention not only for the good done to the individuals who profit by its charity, but also for its attempt to give precision to our knowledge of the effect of sea air upon the diarrhœal diseases of children. The home is conducted simply on the conviction that a change of air from the hot city street to the shore of the sea is in itself a sufficient remedy for the great majority of the summer diseases of little children. Their mothers accompany the infants to the sea-shore whenever this is possible. The management regard the presence of the mothers with the children as an important feature of administration. "The good done to a worn-out, nursing mother, brought from a hot, ill-ventilated home into invigorating sea air is to be spoken of as only second to that miracle wrought when a little child, almost dead with cholera infantum, breathes the same elixir, sits up, and begins to speak."

In 1882 131 children were received, of whom 51 were under one year; 75 had diarrhœal diseases. There were eleven deaths, two of which occurred within twenty-four hours of their admission; all but one of the fatal cases were bottle fed. Physicians in charge of charitable cases are encouraged by the management to send even the most difficult and unpromising cases, "for it is not our ambition to show, on paper, a high percentage of recoveries. Our business and our ambition is to do, with the means intrusted to us, the utmost which is possible for those children of the poor who are in the most danger, and for the mothers."

LEPROSY IN NEW YORK.

At the last meeting of the New York County Medical Society Dr. Piffard stated that there were now in the wards of Charity Hospital, on Blackwell's Island, no less than four cases of genuine leprosy, and as it was, he said, a very unusual thing to have as many cases of this disease in the city at one time, he gave a cordial invitation to all who would be interested in seeing these patients to accompany him on the following afternoon to the island. Accordingly at the time mentioned quite a number went with Dr. Piffard to the hospital.

One of the patients is a Dane, and another a Chinaman. In proportion as countries in which leprosy prevails to a considerable extent, such as Norway, China, and the Sandwich Islands, are brought into closer relation with the United States, by means of immigration or trade communication, there is an increasing danger of the spread of leprosy here, especially in our large cities, and it is thought that at New York, at least, steps should at once be taken towards the establishment of an isolated lazaretto to which all lepers could be sent.

MEDICAL NOTES.

— The annual meeting of the Middlesex North District Medical Society was held Wednesday afternoon, April 26th. There was a meeting of the Censors in the morning at the same place, the same day, and six new candidates were admitted. The following list presented by the Nominating Committee for officers for the ensuing year was elected: President, Charles Dutton, Tyngsborough; Vice-President, William Bass; Secretary, George C. Osgood; Treasurer, N. B. Edwards, North Chelmsford; Librarian, William B. Jackson; Commissioner of Trials, Nathan Allen; Councilors, Levi Howard, Chelmsford; George E. Pinkham, Francis C. Plunkett, Franklin Nickerson, Cyrus M. Fisk, Samuel W. Fletcher, Lorenzo S. Fox, Hermon J. Smith, Moses G. Parker; District Nominating Committee, George E. Pinkham; Censors, John C. Irish, F. W. Chadbourne, Leonard Huntress, Jr., John J. Colton, T. Pierpont Shaw; Reporter, William H. Lathrop, Tewksbury.

— Prof. Roberts Bartholow has been elected dean of the Faculty of Jefferson Medical College in place of Dr. Ellerslie Wallace, who retires on account of sickness.

— A New York medical contemporary says that a religious weekly of this city contains among its medical advertisements (over which, by the way, it claims to exercise an editorial supervision so as to recommend only such quack remedies as are "reliable") a notice of a sure cure for gonorrhœa in four days.

— The commission appointed to examine into the best color for the uniform of the British army has been conducting a series of experiments under varying conditions of weather, atmosphere, surroundings, and background. Proceeding by a process of exclusion the result was to eliminate all the colors at present used in the dress of the army, the "glaring conspicuousness" of white and scarlet being at once evident. The neutral colors, more particularly the Indian "khakee," which is a gray or dust-colored cloth, and certain volunteer grays, were indistinct even at short distances, and practically all but invisible at long ranges. The question was in the end narrowed down to a shade of gray, which, besides its character of invisibility at a distance, stands exposure to sun and rain without fading. The committee have recommended that this gray should be adopted as the service dress of the army. It is believed that this change will be unpopular. It is undeniable that the traditional scarlet is most effective for holiday soldiery, but as our English friends manage to get some actual fighting to do almost every year it may be that the Philistines will carry the day over the æsthetes.

NEW YORK.

— At the last meeting of the County Medical Society, held April 23d, Dr. Frederic R. Sturgis announced that there was now a bill before the State Senate at Albany to legalize the notorious United States Medical College, which had lately been deprived of its charter, and that a special feature of the bill was that it was retroactive in its effect, and would establish the legal standing of all those who had received diplomas from the institution in the past. In view of these facts, he said, a petition had been framed protesting against the passage of any such act, on the ground that the said college was both illegal and disreputable, and he trusted that all who were present would affix their names to it before leaving the hall. On motion of Dr. H. G. Piffard it was resolved that the County Society, as a body, should also send an official memorial, duly signed by the president and secretary, to Albany to the same effect.

— An outbreak of typhus fever has taken place at St. Stephen's Home, on East Twenty-Eighth Street, an institution for the care of orphan and half orphan children, and quite a number of the inmates have been transferred to the Riverside Hospital on Blackwell's Island. The examination of the buildings by the sanitary authorities showed that the premises were clean, well kept, fairly ventilated, and not overcrowded, so that it is thought that the disease did not originate in the institution, but was introduced from the outside. It is believed now that the disease will probably not spread any further, the most rigorous measures of disinfection and quarantine having been carried out, but it is a number of years since so many children have been attacked with typhus fever in New York.

— A case of accidental poisoning with carbolic acid is reported from Brooklyn. A father gave his child, a boy of six years, a teaspoonful of a solution of impure carbolic acid in mistake for a cough mixture, which was contained in the same kind of a bottle. As soon as the mistake was discovered medical aid was summoned, but the child died in a short time.

— A man whose wife is an inmate of the King's County Asylum, Brooklyn, affected with chronic and hopeless insanity, and who, wishing to marry again, recently offered the physician in charge one hundred dollars if he would poison her, was hardly prepared for the reception which his proposition met with. The doctor promptly dealt his visitor a blow which knocked him down, and then requested an attendant to show him the way out.

Correspondence.

LETTER FROM ANTWERP.

A VISIT TO THE COLONY FOR THE INSANE AT GHEEL.

MR. EDITOR, — Among the medical curiosities of Europe one of the most interesting, and to the student of mental diseases not the least instructive, is the town of Gheel in Belgium. Fully one half of the two thousand families of this town are occupied with the care of the insane, there being at present no less than 1,600 patients of this class living in comparative freedom in the families of the villagers constituting the so-called colony of Gheel. Considering the fact that Gheel is almost within an hour's ride of Antwerp by rail, and on one of the direct routes from Berlin, it is but seldom visited, although not infrequently mentioned in connection with the discussion of the "open-door" treatment of insanity. The general results here achieved in this direction are well known, but the manner of development and working plan of this curious colony are so little understood in general that a description may not be uninteresting. My knowledge of the place has been gathered from observation and inquiry during a recent visit, supplemented by the report[1] of the delegation who visited it from the International Medical Congress at Paris in 1875; on this report I have drawn largely for confirmation of notes there taken and for facts which I failed to elicit. From description one can only gain an approximate idea of the peculiar relation existing between keeper and patient at Gheel, and an actual visit is required to enable one to realize that over a thousand "lunatics" may be at large in a village of this size without making themselves particularly noticeable.

The date at which Gheel began to be devoted to the care of the insane is hard to determine. It may with certainty be placed as early as the twelfth century, and legend carries it to a much earlier period. At this time, and for long afterwards, nervous and mental diseases were considered the work of the evil one, and their treatment was principally religious, consisting of prayers, devotions, and exorcism. The sufferers ap-

[1] Compte rendu du Congrès périodique international des Sciences médicales.

plying for treatment were for some time kept in buildings about the chapel, and the heavy chains for their confinement are still shown. The priests of Gheel seem to have been so popular that these accommodations did not long suffice, and soon the hospitality of the villagers had to be called into requisition to keep the patients before and during treatment. The inhabitants of Gheel became thus from the earliest times accustomed to associating with and caring for the insane, and the very children learned to regard the mentally afflicted not as objects of fear and aversion, but as human beings deserving sympathy and attention. In this way was gradually established the best possible condition for the nursing of the insane, they being separated from their friends and relatives who did not understand them and placed among those who did, and on the other side the presence of the insane came to afford the villagers less and less inconvenience as they became more familiar with their peculiarities and the methods of avoiding disturbance. As the whole population of Gheel thus became devoted, generation after generation, to this work the demand for the exercise of their talents naturally increased, and at last a large colony for the insane was here established; so that when the priest retired in favor of the physician the villagers continued the work for which they had become by inheritance, tradition, and experience so well fitted. Within the last thirty years the government has taken the management of the colony into its hands, and there now exists a regularly organized administration in place of the former lack of system. This change was not made without opposition, especially as the interference of physicians had been previously rigorously excluded. Now that the new order of affairs is well established, however, the satisfaction is as great on the part of the villagers as on the part of the government, and at present a peculiarly happy relation seems to exist among all the parties interested. The central bureau of the administration is called the infirmary, and for this the visitor should inquire on leaving the train. A walk of half an hour through the town brings one to this establishment, a large building capable of accommodating sixty patients. In this reside the director of the colony and his five medical assistants. I was cordially met by the former, who had just completed an autopsy, and who regretted that the death of the burgomaster, which occurred that day, imposed duties on him and his assistants which could not be neglected; he assured me that if I would remain until the next day he would do his best to enable me to gain a thorough knowledge of the entire colony, but as this was impossible he committed me to the care of a "guard," who did the honors of his section. Before visiting the section I was shown the infirmary. The uses of this building are threefold. In the first place all patients are placed here for observation and classification, in order that they may be assigned appropriate homes outside. Here are also sent such patients from the colony as require special medical attendance, also such as by acts of violence or indecency have proved themselves unfit, at least temporarily, for the family life. The building contains accommodations for patients of the various degrees of derangement, and a few cells for seclusion, with arrangements for observation of the inmates. The wards for males occupy one half of the building, and those for females the other, the two being separated by the chapel. Ample accommodations are provided for bathing, and opportunities for amusement are not wanting. The solitary cells were empty at the time of my visit, and I was informed that they are rarely used. The wards were also far from full, and I was told that patients are seldom sent in from the village, although the number outside is at present very large. In making the round of the building I missed the locking of doors usual in such institutions, and was told that even here the majority of the patients are free to come and go at will, the cases requiring physical restraint being reduced to the minimum.

The patients are for the most part to be found in the houses of the village, in some houses one, in some two; the latter number according to the regulations is not to be exceeded. Patients of opposite sex never occupy the same house. The families keeping the so-called "*pensionnaires*" are divided into two classes, according to the grade of accommodation offered. Those receiving *pensionnaires* able to pay are called *hôtes*, those receiving paupers are called *nouriciers*. Payment is made to the administration according to the grade of the patient; that made for paupers by the government sending them does not exceed $60 per year, and varies slightly according to the amount of care required. The price for wealthier patients varies from $100 to $1,200. Of this amount a certain per cent. is reserved for the administration, and the rest paid over to the villagers to whom the patients have been allotted. The pecuniary and social is not the only distinction made in the colony, but the patients are distributed according to the degree and variety of mental derangement. The centre of the village (*quartier des aliénés paisibles*) is devoted to the most quiet and curable patients. Those occupying this quarter are called *pensionnaires internes*, and the appointment to this neighborhood is held out as a reward of merit for good behavior on the part of the *pensionnaires externes*. The latter are distributed according to their mental condition; those somewhat troublesome but offering hope of recovery are located not far from the centre of the village (*quartier des demi-agités*). The most troublesome patients are placed in the outlying hamlets (*quartier des agités*). The epileptics, paralytics, and dements are placed in a locality distant from running water (*quartier des gâteux*). The idiotic children are congregated in a hamlet where special educational advantages are furnished, although they associate freely with other children. The placing and displacing of the *pensionnaires* is in the hands of a permanent committee and under the supervision of the medical director. Although the *pensionnaires* must sometimes for various reasons be removed, it is rare that a family is declared unfit to keep them, such a judgment being considered a great disgrace. The assignment of *pensionnaires* by the administration is thus regarded by the villagers as a token of consideration, and an evidence of respectability on the part of the family. The *pensionnaires* are in turn naturally treated in most cases with kindness, and in many with distinction. The town is divided into five sections, each of which is presided over by one of the assistant physicians, whose duty it is to make the round of his section once a month, while the director must visit the entire colony twice in the year. Each section is also under the charge of a non-medical "guard," an officer who has the general management, including the enforcement of sanitary regulations, for it is not to be imagined that the villagers, experienced as they are in the care of the insane, are such models in all

details as to require no supervision. The guard of the central section took me about in his department, showing the several grades of *pensionnaires*. As an example of the better class he took me into a pleasant though by no means elegant house in which two Englishmen resided as *pensionnaires*. One of them was out, but the other, formerly an architect, did the honors of the establishment with the assistance of the landlady. He exhibited a large number of finely-executed water-colors, with the remark that they were rather good for a madman, and said that whenever he had an attack of restlessness he worked it off by painting in the fields, regardless of the weather. As an example of the lower class I was shown a poorly-furnished but neat house in which was a room given up to a pauper patient. The poorer *pensionnaires* share, if possible, the work as well as the family life of the villagers, and in locating them their previous occupation is taken into consideration, so that they are found working indiscriminately, some among the artisans and others among the farmers. Where the work performed is such as would elsewhere deserve payment, this fact is taken into consideration in the settlement. The guard pointed out as *pensionnaires* several persons whom we passed on the street, and remarked that it was hard to realize that we were in the middle of a town in which over a thousand lunatics were coming and going freely. Among other objects of interest I was shown a hall arranged for concerts and theatrical performances, and was informed that this was only one of many provisions for the amusement and cultivation of the patients. A peculiarly quiet and orderly air pervades the town, which seems to result in part from the natural character of the inhabitants, and in part from a spirit of emulation among them, all wishing to be considered worthy of obtaining and keeping *pensionnaires*. The question naturally arising as to the effect on the normal mind of this constant and familiar association with the insane was answered by the statement that no more insanity exists among the permanent inhabitants of Gheel than among those of other places of its size, and that many families have handed down this occupation through generations without sign of nervous or mental affection appearing among their members. The *pensionnaires*, although for the most part seemingly unobserved and free to do as they please, are in reality carefully though unobtrusively watched, and the training of the villagers in this direction enables them to note and circumvent, with as little force as possible, a tendency on the part of the *pensionnaires* to do injury to themselves or others. The question as to what would happen if a patient took a fancy to walk off and never come back seems to be answered by the fact that the ability to do so takes away the greatest temptation from the large majority of the patients, and the small remainder would come under the class of those kept under the most careful surveillance, if not under those requiring removal to the infirmary, the number of which is, as we have seen, exceedingly small. Although the freedom in the colony is so great, and the results achieved by the system of non-restraint so remarkable, the fact is recognized that a certain number of the mentally deranged are incapable of being treated in this way, and for these provision is made in the infirmary in the manner already indicated. The stay in the infirmary is, however, made as far as possible temporary, the patients being constantly encouraged to conduct themselves in such a manner as to merit restoration to the family life. The use of coercion, then, although not absolutely abolished at Gheel, has been reduced to the minimum in the infirmary as well as in the family.

While I was waiting in the railway station in the evening after completing my visit, a rather rough-looking man put his head in at the door and inquired if the doctor from Boston was there. On making myself known he announced himself as the other Englishman from the house I had visited, and said that having missed me there he came to the station to see me off. He said he was a former inmate of "Bedlam" in London, and that he was convalescing from religious mania. He spoke very pleasantly of the life in Gheel, although he found it somewhat monotonous, and was looking forward to a chance to work out of doors. In this characteristic manner ended my extremely interesting visit to Gheel, an experience to be recommended to every medical traveler.

Yours truly,

G. L. WALTON, M. D.

Miscellany.

BURIAL CUSTOMS IN ENGLAND.

WE find in a daily contemporary an interesting letter from a foreign correspondent regarding mortuary customs in Europe and particularly in England. The writer says, "I was very glad to see and hear, as I wandered about England, that 'tombs were out of fashion' in that country. There is a strong sentiment against them there. The nobility and gentry, and the higher middle classes, have, by precept and example, greatly helped to foster the custom of their disuse. Many of the most prominent and wealthy families are determined that their dead shall be buried in mother earth. The earth is a consuming fire to the mortal remains that are allowed to come directly in contact with it. There is a large corporation in London that has for its object the manufacture and sale of wicker coffins, or, as they are termed in England, earth-to-earth coffins, which are advertised as enabling the dead to be buried in the earth without danger to the living. I found that these basket coffins, which have so far only been used to a very limited extent in the United States, are rapidly growing in favor in London." The same change of feeling was noticed in regard to the brick-lined graves which a few years ago began to take the place of tombs; and a remark is quoted from a cheery, ruddy English gentleman, in a discussion upon this topic: "Bury me," said he, "in an earth-to-earth willow coffin, in good porous soil, so that I shall in the shortest time possible get back into God's pure and sweet air again." But while the customs of the present generation are changing for the better, it is, as might be expected, even harder than with us to put a reasonable limitation on the claims of the dead, when these claims, fortified by the prejudice of ages, come in contact with the interests of the living. "I found," says the writer, "in the heart of the great metropolis of London, under the shadow of St. Paul's Church, where land has been sold at the rate of hundreds of dollars a foot, as well as in the rural interior of England, where land is worth some hundreds of dollars an acre, huge old monumental slabs prone upon the ground where they had been lying for centuries, and where they were likely to lie centuries longer, from whose surface corroding Time had erased every letter of inscription, but which were supposed to

mark the spot, where, in the far past, some poor mortal has been laid to rest. Who the individuals buried beneath those slabs were no one now knew; yet any removal of the grave-stones would be deemed sacrilege; and there they must forever remain cumbering the earth though all about are men longing for a chance to cultivate a little land, yet destined to live and die without owning a foot of England's soil. From the grave of a remote and forgotten past a dead hand reaches forth and grasps, with the grip of death, the bright green land which should be the inheritance of the living."

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 21, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	676	258	19.07	21.12	5.51	3.28	—
Philadelphia	846,984	387	124	12.17	11.91	6.99	2.51	.52
Brooklyn	566,689	—	—	—	—	—	—	—
Chicago	503,304	—	—	—	—	—	—	—
Boston	362,535	199	60	17.59	22.11	6.03	2.51	—
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	155	58	21.32	12.92	9.06	3.88	3.88
Cincinnati	255,708	120	53	13.28	33.33	.83	4.15	—
New Orleans	216,140	153	46	39.83	7.18	.65	—	30.04
District of Columbia	177,638	75	21	21.28	17.29	3.99	5.32	—
Pittsburg (1883)	175,000	59	—	27.10	16.94	13.55	3.39	—
Buffalo	155,137	87	36	26.18	19.04	4.76	9.52	—
Milwaukee	115,578	47	23	21.28	14.90	6.39	2.13	—
Providence (1883)	116,755	57	8	12.18	12.18	—	—	—
New Haven (1883)	73,000	20	5	5.00	25.00	—	—	—
Charleston	49,999	33	5	9.09	15.15	—	—	—
Nashville	43,461	18	10	55.55	11.11	—	11.11	11.11
Lowell	59,485	35	13	11.43	8.57	2.86	2.86	—
Worcester	58,295	30	17	13.33	16.66	3.33	—	—
Cambridge	52,740	21	4	4.76	23.81	4.76	—	—
Fall River	49,006	21	6	4.76	18.13	4.76	—	—
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	8	1	12.50	25.00	—	12.50	—
Springfield	33,340	10	1	30.00	10.00	—	20.00	—
Salem	27,598	4	0	75.00	—	25.00	50.00	—
New Bedford	26,875	14	3	—	14.28	—	—	—
Somerville	24,985	18	5	27.77	16.66	11.11	5.55	—
Holyoke	21,851	6	1	16.66	33.33	—	—	—
Chelsea	21,785	10	1	—	20.00	—	—	—
Taunton	21,213	8	0	—	25.00	—	—	—
Gloucester	19,329	12	1	—	41.55	—	—	—
Haverhill	18,475	6	2	—	33.33	—	—	—
Newton	16,995	3	0	33.33	33.33	33.33	—	—
Brockton	13,608	3	0	33.33	—	—	—	—
Newburyport	13,537	10	13	—	20.00	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	4	0	—	—	—	—	—
Twenty-two Massachusetts towns	167,288	80	23	15.00	13.75	2.50	5.00	—

Deaths reported 2199 (no reports from Brooklyn, Chicago, and St. Louis): under five years of age 788: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 442, lung diseases 401, consumption 316, diphtheria and croup 120, scarlet fever 76, small-pox 56, measles 44, typhoid fever 32, diarrhœal diseases 32, malarial fevers 24, whooping-cough 21, cerebro-spinal meningitis 17, puerperal fever 10, erysipelas nine, typhus fever one. From *measles*, New York 27, Boston six, New Orleans three, Nashville two, Baltimore, Cincinnati, Buffalo, Springfield, Somerville, and Spencer one each. From *typhoid fever*, New York and Providence seven each, Philadelphia six, Boston, Cincinnati, Chicopee, and Weymouth two each, District of Columbia, Buffalo, Charleston, and Lowell one each. From *diarrhœal diseases*, New York 12, New Orleans nine, Boston six, Baltimore and District of Columbia two each, Holyoke one. From *malarial fevers*, New York 12, Buffalo five, New Orleans and Charleston two each, Baltimore and Brockton one each. From *whooping-cough*, Cincinnati and Pittsburg five each, Nashville four, Boston, District of Columbia, Milwaukee, and New Haven one each. From *cerebro-spinal meningitis*, New York and Milwaukee three each, Buffalo and Worcester two each, Boston, Baltimore, District of Columbia, Pittsburg, Lowell, Somerville, and Milford one each. From *puerperal fever*, Boston, Milwaukee, and Nashville two each, Cincinnati, District of Columbia, Buffalo, and Worcester one each. From *erysipelas*, New York five, Baltimore two, Cincinnati and District of Columbia one each. From *typhus fever*, Philadelphia one.

Eighteen cases of small-pox were reported in Baltimore, Buffalo seven, Pittsburg two, Boston one, District of Columbia one; scarlet fever 20, diphtheria 14, and typhoid fever six in Boston; scarlet fever 24, and diphtheria 12 in Milwaukee.

In 41 cities and towns of Massachusetts, with an estimated population of 1,154,341 (estimated population of the State 1,922,530), the total death-rate for the week was 22.78 against 19.83 and 21.74, for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending April 7th, the death-rate was 26.1. Deaths reported 4309: acute diseases of the respiratory organs (London) 612, whooping-cough 112, measles 87, scarlet fever 55, fever 52, diarrhœa 31, diphtheria 24, small-pox (London and Newcastle one each) two. The death-rates ranged from 18.1 in Salford to 35.7 in Manchester; Bristol 20.6; Wolverhampton 22.9; Birmingham 24.4; London 25.6; Leicester 27.4; Nottingham 29.1; Liverpool 32.4. In Edinburgh 26.3; Glasgow 33; Dublin 40.3.

For the week ending March 31st, in 171 German cities and towns, with an estimated population of 8,713,054, the death-rate was 28.5. Deaths reported 4782; under five years of age, 2029; consumption 802, lung diseases 776, diphtheria and croup

165, diarrhœal diseases 117, measles and rötheln 91, whooping-cough 85, scarlet fever 53, typhoid fever 52, puerperal fever 14, typhus fever (Braunschweig two, Stettin, Posen, Hanover, and Celle one each) six, small-pox (Königsberg, Breslau, Heilbronn, and Berlin one each) four. The death-rates ranged from 14.7 in Wiesbaden to 70.1 in Wurzburg; Königsberg 28; Breslau 37.7; Munich 33.8; Dresden 25.2; Berlin 26; Leipzig 24.3; Hamburg 31.2; Cologne 30.4; Frankfort a. M. 22.1; Strasburg 28.2.

For the week ending April 7th, in the Swiss towns there were 49 deaths from lung diseases, consumption 37, diarrhœal diseases 15, diphtheria and croup eight, typhoid fever three, measles two, erysipelas two, whooping-cough one. The death-rates were, at Geneva 16.4, Zurich 20, Basle 25.4, Berne 47.4.

The meteorological record for the week ending April 21st, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date. April, 1883.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Mins.	Amount in inches.
Sun., 15	30.207	43	61	36	83	76	89	83	S	E	SW	2	12	4	C	C	C	—	—
Mon., 16	30.008	52	65	35	89	37	66	64	SW	SW	S	7	7	4	O	C	O	—	—
Tues., 17	30.008	46	59	40	93	86	93	91	SE	E	S	3	9	2	F	C	O	—	—
Wed., 18	29.929	56	62	44	59	46	45	50	NW	NW	NW	11	11	6	C	C	F	—	—
Thurs., 19	29.825	55	66	44	48	35	71	57	E	S	S	3	14	12	C	O	O	—	—
Fri., 20	29.757	45	54	39	86	92	51	76	SW	NW	NW	7	17	9	O	B	C	—	—
Sat., 21	30.029	48	56	36	51	29	60	47	W	NW	NE	9	16	5	C	F	C	—	—
Means, the week.	29.966	49	60	39				67										4.25	.37

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening; B., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM APRIL 20, 1883, TO APRIL 27, 1883.

CLEARY, PETER J. A., major and surgeon. So much of paragraph 10, S. O. 273, November 23, 1882, from this office, as directs him (then captain and assistant surgeon) to report in person to the commanding general, Department of Dakota, is revoked, and upon the expiration of his present sick leave of absence to report in person for assignment to duty in the Department of the Missouri. S. O. 95, A. G. O., April 25, 1883.

HOPKINS, WILLIAM E., first lieutenant and assistant surgeon. Now on leave of absence in New York City, to be relieved from duty in the Department of the East, and assigned to duty in the Department of Arizona. Paragraph 7, S. O. 95, A. G. O., April 25, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FOR THE WEEK ENDING APRIL 28, 1883.

J. B. PARKE, surgeon, ordered to the Torpedo Station, Newport, R. I., vice Surgeon William J. Simon, detached and awaiting orders.

M. H. SIMON, passed assistant surgeon, detached from the Naval Hospital, Chelsea, Mass., and ordered to the Naval Hospital, Yokohama, Japan, vice Passed Assistant Surgeon C. Biddle, detached and ordered to the Richmond.

A. A. AUSTIN, passed assistant surgeon, from the Richmond and ordered home.

J. H. BRYAN, assistant surgeon, ordered to report May 1st for examination for promotion.

GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting will be held at the Medical Library Rooms, on the second Thursday of May, at four o'clock P. M. Paper by W. S. Brown, M. D., Rupture and Permanent Cure of an Ovarian Sac. Lunch served at close of session.

HENRY M. FIELD, M. D., *Secretary.*

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A meeting of the Society will be held at the Medical Library, No. 19 Boylston Place, on Monday, May 7th, at eight o'clock P. M. Communications: Dr. S. J. Mixter, The Use of Fusible Metal in Anatomical Preparations, with Specimens. Dr. C. Harrington, A Description of New Methods and Apparatus for Determining the Percentage of Fat in Milk. Election of Members.

CHARLES H. WILLIAMS, *Secretary.*

BOSTON MEDICAL ASSOCIATION. — The annual meeting will be held at the Medical Library, No. 19 Boylston Place, on Monday, May 7, 1883, at half past three in the afternoon.

F. H. DAVENPORT M. D., *Secretary.*

BOOKS AND PAMPHLETS RECEIVED. — Handbook of the Diagnosis and Treatment of Diseases of Throat, Nose, and Naso-Pharynx. By Carl Seiler, M. D., Lecturer on Laryngoscopy at the University of Pennsylvania, etc. Second Editon, Thoroughly Revised and Greatly Enlarged. With Seventy-Seven Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1883.

How to Examine the Chest. A Practical Guide for the Use of Students. By Samuel West, M. D. Oxon., M. R. C. P., Physician to the City of London Hospital for Diseases of the Chest, etc. Philadelphia: Blakiston, Son & Co. 1883.

Some of the Opportunities, Responsibilities, and Encouragements of Life. An Address delivered before the Massachusetts Dental Society at its Eighteenth Annual Meeting in Boston, December 14, 1882. By C. A. Brackett, D. M. D, of Newport, R. I. Boston: Wright & Potter. 1883.

The Bacteria. An Account of their Nature and Effects. Together with a Systematic Description of the Species. By T. J. Burrill, Ph. D., Professor of Botany and Horticulture, Illinois Industrial University, etc. Springfield, Ill.: By State Printers. 1882. (Reprint.)

The Higher Professional Life. Valedictory Address to the Graduating Class of Jefferson Medical College, Philadelphia. Delivered April 2, 1883. By J. M. DaCosta, M. D., Professor of the Practice of Medicine. Philadelphia: J. B. Lippincott & Co. 1883.

Seventh Annual Report of the Managers and Officers of the State Asylum for the Insane at Morristown, N. J., October 31, 1882.

Circulars of Information of the Bureau of Education. No. 4. 1882. Industrial Art in Schools. By Charles G. Leland, of Philadelphia. Washington: Government Printing Office. 1882.

Reports of the Trustees and Superintendent of the Butler Hospital for the Insane. Presented to the Corporation at their Annual Meeting, January 24, 1883. Providence. 1883.

Providence, R. I. Report of Deaths during the Month of January, 1883. By Edwin M. Snow, M. D., Superintentdent of Health and City Registrar. Providence. 1883.

Original Articles.

ACCUMULATIONS OF EPIDERMIS IN THE EXTERNAL AUDITORY CANAL.[1]

BY CLARENCE J. BLAKE, M. D., BOSTON.

THE simplest and most frequent form of obstruction of the external auditory canal is the result of the accumulation of the ceruminous secretion, the product of the glandulæ ceruminales, located in the outer or cartilaginous portion of the canal, and discharging either directly into the meatus or into the upper portion of the hair sacs a yellowish-brown substance, sticky to the touch, bitter to the taste, and serving through these two characteristics as a protection against the entrance into the canal of small foreign bodies and insects.

Exposed as it is freely to the air in that portion of the canal which slopes downward and outward, the excess of this secretion, left to natural processes, is extruded by flowing outward or by the drying of its superficial layers, which liberates it in the form of an impalpable powder. Its undue accumulation in the canal is usually the result either of an excessive secretion or of attempts at washing the ear by which the secretion is gradually pushed back into the canal, the result finally being a complete occlusion of the passage, which, as the cerumen is readily soluble in warm water, is generally easily relieved by the simple process of syringing.

Less common, far less easily remediable, and frequently mistaken at first sight for the simple ceruminous accumulation, is the occlusion of the canal by masses of epidermis, and it is the difficulties sometimes met with in the treatment of cases of this kind that make them especially worthy of notice.

This accumulation may occur as a complication of the simple ceruminous accumulation, the plug of cerumen filling the canal having prevented the extrusion of the effete epidermis until, after washing out the cerumen, there may be removed entire, by careful manipulation with the forceps, a hollow epidermal cast of the canal and outer surface of the membrana tympani. It may occur also as a result of any of the inflammatory processes in the external ear, such as eczema and furunculosis, or the circumscribed or general growth of vegetable parasites, as the ultimate symptom of what Dr. Buck, of New York, calls otitis externa desquamativa, and, finally, as the result of the suspension of the natural process of progressive growth outward of the epidermal lining of the canal.

In all of these cases the epithelial mass, which is the real cause of the symptoms of deafness, tinnitus aurium, sense of fullness and discomfort, amounting even to pain, from which the patient seeks relief, may be masked by an outer covering of the comparatively innocent cerumen, and it is then only after repeated syringing, which washes away the cerumen and nothing else, that the true character of the obstruction is revealed in the form of a mass of tightly-packed, sodden epidermis, insoluble in water, breaking away under the grasp of the forceps, and if, as is sometimes the case, under the combined influences of moisture and the warmth of the canal having undergone in its central parts a fatty degeneration, presenting very considerable difficulties in its complete removal.

[1] Read before the Boston Society for Medical Improvement, April 9, 1883.

Although, as has been said, this form of obstruction is comparatively rare, it is sufficiently common to make it wise for the surgeon, in any case of apparently simple ceruminous obstruction, to give a guarded prognosis until the true nature of the accumulation has been ascertained, and this is easily done either by careful probing or manipulation with the forceps, under good illumination, of course, or by a preliminary syringing.

The presence of an epithelial mass having been determined, the process for its removal must depend upon the character of the mass. If the epithelium surrounds or is intermingled with a precedent accumulation of cerumen, syringing with warm water or with a weak warm solution of bicarbonate of soda may alternate with the use of a pair of fine, angular forceps, by means of which the epidermis is removed piecemeal. If the mass is purely epithelial syringing is of very little use unless the mass can be peeled away from some portion of the wall of the canal by means of the probe or forceps, and the water permitted an entrance to the deeper portion of the canal, when, by forcible syringing in a definite direction, the peeling process is continued, and the mass finally washed out as a solid body. In the great majority of these cases, however, the forceps have to be relied upon for the complete clearance of the canal. It is when the accumulation has undergone in part a fatty degeneration that the greatest difficulties are presented; in such case there is a central lardaceous mass, perfectly resistant of water, and affording no hold for the forceps, surrounded by more or less complete investments of epithelial layers, which break away in aggravatingly small pieces when seized, and in many of these cases there is, surrounding and still more tightly impacting this mass, the inflamed and swollen lining of the canal, excessively tender, and bleeding freely at a slight touch; when this condition of things is further complicated by the fact that the patient has sought relief because of recent pain in the ear, which is steadily increasing, accompanied, moreover, by an increase of the swelling in the canal, which tends to make manipulation increasingly difficult, the situation is by no means a pleasant one unless speedy relief is afforded. To this end in cases of this kind I have resorted to the simple expedient of converting the insoluble lardaceous mass into soluble soap. This is easily and painlessly accomplished by boring into the centre of the mass with a cotton-tipped probe dipped in caustic potash, the walls of the canal having first been moistened with weak acetic acid; the alternation of this procedure with syringing with warm water is usually sufficient to break up the mass to an extent which will permit the removal of its firmer portions by means of the forceps. While the acetic acid sufficiently protects the outer portion of the canal the action of the caustic potash is so rapid that especial care should be taken not to push too rapidly into the mass, or without repeated suspension of the application, for the purpose of syringing and inspection, in order to avoid penetration with the caustic to the sound tissues beyond.

Cases requiring this form of treatment are, fortunately, rare. The accumulation is usually one of long standing, and the result of a previous inflammation of the lining of the canal, the pain incident to the recurrence of which is usually the reason for the patient's seeking relief.

The fact that there is a progressive movement outward of the dermoid lining of the external auditory

canal has long been recognized; the more precise direction and the rate of this movement have been more recently determined, and while the results of the experiments defining this have been already published I may be permitted to refer to them here as having a bearing upon the causation of the various forms of epidermal accumulation.

The starting-point of this progressive movement outward seems to be the centre of the membrana tympani, and the direction and rate of the movement were determined in the following manner, the cases selected for the experiment being those with a healthy membrana tympani, and preferably a large external auditory canal. The accompanying diagram represents, as it were, briefly the summary of results of a large number of observations: —



Small disks, of about the size represented in the diagram, were cut from thin, double-sized foreign post or note paper, dipped in water, caught one at a time upon the end of a fine, cotton-tipped, bent wire probe (care being taken not to touch them with the fingers on account of removing the sizing), carried into the ear under good illumination, and successively brought into contact with the membrana tympani, to which they immediately and firmly adhered, the warmth of the surface quickly setting the sizing, in the several positions, as nearly as was possible in each case, indicated in the diagram. At intervals of from two to five days the ear was examined, and the movement of each disk recorded on a drawing, the cumulative results of a large number of such drawings being here represented.

The disks placed just posteriorly to the malleus usually made a nearly straight line toward the posterior superior periphery of the membrane, their lines of movement coinciding after they had passed the periphery and reached a point varying from two to five millimetres distant from the periphery, upon the wall of the canal. The disk placed at the tip of the malleus described a slight curve, and followed the line of its predecessors, but without overtaking them, being usually from one to three days longer in reaching the periphery.

The third disk, placed in front of the tip of the malleus, instead of reaching the periphery by the shortest route, described, in the great majority of the cases, after what appeared to be a period of hesitation, a still larger curve, and made its way also toward the posterior superior periphery, from three to five or more days in the rear of the first disk. The disk placed in front of the malleus about half way between the tip of the manubrium and the short process made its way, more slowly than the others, however, in a nearly straight line toward the anterior superior periphery, where, once arrived, it either continued directly outward along the superior wall of the canal, finally trending, however, slightly toward the posterior wall, or described the curve indicated in the diagram, passing over the superior border of the membrane of Shrapnell; as the majority, though a very small one, of the disks placed in front of the malleus chose this latter course, it is so represented here.

From these observations it would seem that the most rapid clearing away, so to speak, of the dermoid coat of the membrana tympani occurs in that portion of the membrane the integrity of which is most important to its function of vibration with the malleus, and that the most vigorous progressive outward movement of the lining of the canal occurs in the same line.

In following the course of the paper disks along the canal, moreover, it is found that from the posterior superior periphery of the membrana tympani outward they describe a curve, coming downward upon the posterior, and even upon the posterior inferior wall of the canal, by the time that they have reached a point corresponding to the junction of the osseous and cartilaginous portions of the canal, at which point their further outward progress is usually terminated by the separation of the thin epidermal layer from the surface beneath.[1]

This simple experiment is so easily made that I hope that the observation will be repeated by others to the end of either confirming or correcting the results here given.

Considering this progressive growth of the outer coat of the membrana tympani and lining of the external auditory canal as a normal function, the causes of epidermal accumulations may be broadly classed under two heads, those which interfere with the normal extrusion of the epidermis, and those which increase its exfoliation beyond the power of normal extrusion; these two divisions, in many cases, necessarily involve each other. Under the first division may be included (1) obstruction of the canal by a ceruminous plug or other foreign body, and (2) such results of previous and past inflammation as cicatrices and intrinsic adhesions, affording one or more spots on the surface of the membrana tympani or lining of the canal where the progressive exfoliation is interrupted, and a localized exfoliation made possible, while the second division may include any and all of the inflammatory processes implicating the superficial lining of the external auditory canal, either general, such as the diffuse inflammation of the canal, or local, as is the case in the occurrence of isolated patches of growth of aspergillus, of localized ulceration, or the formation of granulations from whatever cause.

REPORT OF A SUMMER COURSE IN OBSTETRICS.[2]

BY C. M. GREEN, M. D.

THE cases included in this report were attended during the summer of 1882 by a class of six second-year students under my supervision. They had had no previous instruction in obstetrics, and it was my aim not only to teach them how to take charge of normal cases but also how to observe and record them. The following summary is based upon the students' observations, verified in many instances by my own. The cases were kindly furnished by the district physicians of the Boston Dispensary.

	Cases.	Males.	Females.	Sex not Recorded.	Sexless Monster.
Multiparæ.	30 [3]	17	16	1	-
Primiparæ.	3	0	2	-	1
Total.....	33	17	18	1	1

[1] Read at the annual meeting of the American Association for the Advancement of Science, Section F, Montreal, 1882.

[2] Read before the Obstetric Section of the Suffolk District Medical Society, February 21, 1883.

[3] Including four cases of twin pregnancy.

The youngest multipara was nineteen years of age, the oldest forty-one; the youngest primipara was twenty-four, the oldest thirty-six.

AVERAGE FŒTAL WEIGHT AND LENGTH.

	Cases.	Weight.	Length.
Males.	11	7 lbs. 11.6 oz.	19.5 inches.
Females.	14	6 lbs. 10 oz.	18.4 inches.

The largest fœtus was a boy weighing ten pounds and measuring twenty-one inches; the smallest fœtus was a girl weighing four pounds and measuring fifteen inches.

POSITION AND PRESENTATION.

O. L. A.	O. R. A.	O. R. P.	S. R. A.	S. R. P.	Uncertain.	Total.
21	5	3[1]	1	1	6	37

The six cases in which the diagnosis of position and presentation was not made were not reached by the attendant until after the child was born, or until labor was so far advanced that the original position could not be ascertained.

AVERAGE DURATION OF THE STAGES OF LABOR.

	Cases.	1st Stage.	2d Stage.	3d Stage.
Primiparæ.	2	25 h. 30 m.	1 h. 15 m.	20 m.
Multiparæ.	22	7 h.	1 h. 35 m.	24 m.

THE THIRD STAGE.

In all the cases except one the placenta was either extruded by the contracting uterus or expressed after the manner of Credé; in the excepted case the placenta was adherent over a small area, and required to be dissected off with the fingers.

There were two cases of post-partum hæmorrhage; one of moderate degree, to be mentioned later, and one in which the hæmorrhage was profuse. The latter case was that of a primipara, aged twenty-four, whose labor was normal. At the end of the second stage the uterus remained quite flaccid, but by kneading and applying ice to the abdomen contraction was caused and the placenta was expelled. But in a few moments, notwithstanding that firm pressure was maintained, the uterus relaxed, and profuse hæmorrhage followed, which filled the bed with blood and formed a pool upon the floor. The student passed his hand into the uterus, under which stimulation firm and permanent contraction took place. The woman made a good recovery.

None of the placentæ were abnormal, but in three cases the cord was attached to the edge, constituting the so-called battledoor placenta. In one instance one of the umbilical arteries was detached from the other vessels for a space of half an inch, forming a small loop.

STATISTICS OF THE PERINÆUM.

	Cases.	Ruptured.	Not Ruptured.
Primiparæ.....	3	1 (one half inch.)	2
Multiparæ.....	28	2 (slightly)	26

[1] In one case the head extended and the brow presented.

THE PUERPERIUM.

One case of septicæmia occurred, which, however, recovered; the other cases had a normal convalescence. Twenty-four women suckled their infants, and one was prevented from so doing by depressed nipples. The infantile mortality amounted to four cases. Of this number one fœtus was putrid, one was malformed and still-born, one had died apparently shortly before labor, and one lived but a few moments after delivery; the last three cases will be referred to hereafter.

CASES OF ESPECIAL INTEREST.

(*a.*) Cases of twins: —

1. A secundipara, aged twenty-eight, was thought to be with twins when examined early in labor, but the diagnosis was not made until after the birth of the first child; examination then revealed a second child presenting the head, O. L. A. The membranes soon ruptured spontaneously, and there ensued extension of the arms over the head and prolapse of the cord. The arms and cord were replaced with the hand, and held above the brim until the head descended and prevented further prolapse; the second child was then born naturally, forty minutes after the first. There were two placentæ, attached to each other for 1.5 inches, and two cords. The children were male and female, and weighed nine and seven pounds respectively.

2. A quintipara, aged thirty-one, gave birth to a girl and boy weighing seven and one quarter and seven pounds respectively; both children presented the head, the first O. L. A., the second O. R. P. In this case the cord of the second child was felt, distinctly pulsating, in advance of the head, before the membranes were ruptured. The cord was pushed up and the membranes ruptured, and the second fœtus was born twenty minutes after the first. The placenta was single.

3. In this case the children were male and female, presenting the head O. L. A. and the breech S. L. P. respectively. The placenta was single, with two cords.

(*b.*) Case of brow presentation: —

The patient had had one abortion, and one labor at full term, completed with forceps, the child having been born alive. The membranes ruptured early in the first stage, and the pains were severe; the student in attendance gave three fifteen-grain doses of chloral hydrate at intervals of twenty minutes, without apparent effect. The diagnosis, correctly made by the student, was O. R. P., the head extended and the brow presenting. I saw the woman about three hours after full dilatation of the os, the head being engaged at the brim and not immovable. Ether having been given I flexed the head and applied forceps. After strong traction the head descended, the occiput rotated to the pubic arch, and the labor was speedily completed. The infant gasped a few times, but unfortunately I was unable to establish respiration; it weighed eight pounds and fourteen ounces.

(*c.*) Case of septicæmia: —

A multipara, aged twenty-three, who had been well during pregnancy, had a normal labor, and escaped perineal rupture. Lactation was established on the second day, and the case progressed naturally until the morning of the sixth day, when the pulse was 130 and the temperature 104.5° F.; chills, diarrhœa, severe pain in the head and back, and partial suppres-

sion of milk and lochia were the prominent symptoms. On the evening of the eighth day the pulse reached 140 and the temperature nearly 105° F., but from this time there was a gradual amelioration of all the symptoms. The treatment consisted of quinine, brandy, and opium; the vagina was freely cleansed with carbolized water, and a carbolized compress was kept over the vulva.

(*d.*) Case of excessive vomiting, albuminuria, and post-partum hæmorrhage: —

A secundipara, aged twenty-two, was subject to nausea and vomiting throughout her pregnancy, and during the three weeks before labor, while she was under observation, the vomiting was very severe. The urine during this period was diminished in quantity, the daily amount varying from twenty-two to thirty-five ounces; the specific gravity ranged from 1.006 to 1.007, and there was a trace of albumen. The sediment contained a few hyaline and finely granular casts. The labor was normal, the head presenting; a posterior position of the occiput added interest to the case, but anterior rotation occurred without assistance. Ether was given during the second stage. After the expulsion of the placenta, which was of the battledoor variety, a considerable hæmorrhage ensued, the pulse being 120. Ergot was given, but not retained; but kneading and firm pressure finally stimulated contractions and controlled the hæmorrhage. The woman got up on the fourth day, and was seized with a considerable secondary hæmorrhage, which, however, ceased when she resumed her bed.

(*e.*) Case of marked anæmia, with œdema; the fœtus stillborn: —

An undecimipara, aged thirty-eight, during the last two months of gestation suffered with marked dizziness, dimness of vision, great prostration, œdema of both legs, and occasionally slight œdema of the hands and about the eyes; vomiting was at times severe. The pulse was weak and rapid, the respiration increased in frequency and at times labored, and the heart's sounds feeble. The urine was of normal specific gravity, and contained no albumen. The woman was at first given iron, and later a mixture of iron and digitalis; beef extract, with pepsin, was also employed; chloral hydrate and bromide of potash were given at night. Five days before labor the fœtus was known to be living, but it was still-born after a short and easy labor, so that its death seems fairly attributable to the mother's anæmic condition.



(*f.*) Case of malformed fœtus: —

An alleged primipara, aged twenty-eight, a prostitute, fell down-stairs when about six weeks pregnant; she also fell on the pavement within two months of her labor. She had promiscuous sexual intercourse frequently during her pregnancy, even within five days of labor; she felt no fœtal movements for three days before her initial pains, and the fœtus was still-born. The upper extremities are fairly well developed, but the right leg is rudimentary, and the left lower limb is entirely wanting; there is also entire absence of anus and external genitals. In order not to mar the specimen, no dissection has as yet been made, but it is probable that the left half of the pelvis and the internal sexual organs are either rudimentary or entirely wanting. According to Förster's[1] nomenclature this malformation would be classified as Pero-Monopus.

REPORT OF A CASE OF RESECTION OF THE RADIUS PERFORMED BY DR. JOHN RHEA BARTON IN 1828.[2]

BY WM. BARTON HOPKINS, M. D.,

Surgeon to the Out-Departments of the Pennsylvania, Episcopal, and University Hospitals.

THIS patient came under observation a month ago at the Episcopal Hospital, where she came with her son, who had received an injury of the head.

The account which she gives of an operation performed upon her fifty-four years ago, by Dr. John Rhea Barton, is in many respects incomplete, but when it is considered that more than half a century has elapsed, that she was only ten years old at the time, and that during all this interval she has never been questioned particularly in regard to the operation, or to the disease which gave rise to it, her description will appear vivid, and an adequate idea may be formed of the deep impression which was made upon her memory by undergoing a painful surgical operation without anæsthetic.

She says that when she was ten years of age she was taken in the spring or early summer to the Pennsylvania Hospital for a disease of the fore-arm, which, it was thought, followed a sprain of the wrist. After remaining for some time in the house she was operated upon. Dr. Barton placed her arm upon a table, and, with an instrument which cut at both ends, made an incision, and by scraping and cutting removed a long piece of bone full of small holes like a honey-comb, and containing a large cavity in its centre. He told the students present at the operation that he did not expect new bone to form, but that a gristle-like substance would take its place. He was assisted by the Resident Physicians, Drs. James A. Washington and George Fox. She remained in the hospital until the autumn, and in a few months after her discharge regained to a great extent the use of her hand.

Her name and age have been found in the record of the hospital, the date of her admission being July 16, 1828, and of her discharge, November 15th, of the same year.

In studying the condition of the parts as they now present themselves it will be of interest to note the main causes which have brought about the usefulness of the hand, the changes in position and function of the parts not involved in former disease incident to the removal of so important a structure as the entire or almost entire diaphysis of the radius, and the influence these alterations have had upon the growth and development of the bones and soft parts. The usefulness of the hand would seem to depend not only upon the preservation of the upper and lower epiphyses of the radius, the former through probable extension of the periosteum giving attachment to the biceps muscle and

[1] Missbildungen des Menschen, S. 68.

[2] Read before the Philadelphia College of Physicians and Surgeons, April 4, 1883.

the latter to the long supinator, but also upon the strong healthy character assumed by the skin investing the lower end of the ulna. This skin cap is the principal antagonist to the action of the muscles of the fore-arm, and if from constant pressure against the bone it had become thin and tender, as it very likely would have done without the intervention of a bursal sac, every movement of these muscles would have caused pain, and the hand would have become almost useless.

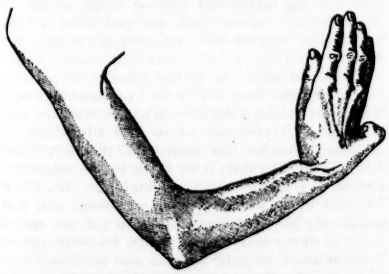
The skin has, of course, yielded to a considerable extent, and the hand has, therefore, been gradually dragged up the fore-arm. The thumb, from the loss of the origin of its long flexor, has become feeble and disused. The ulna has been made an active agent in support, and having lost its styloid process, presumably by absorption, the lower end has assumed a smooth knob-like appearance.

The growth of the sound bones has been comparatively little arrested, this being evidence that active work was performed by the hand during the growing years, which succeeded the operation. The humeri are the same length. The right ulna is one and a quarter inches shorter than the left. Part of this difference must be accounted for, however, by the absence of the styloid process, and part may also be due to a somewhat deficient development of the whole lower epiphysis in length — though not in breadth — as it is full and broad.

From measurements made of the ulna in connection with this case, the average length of the bone in females at the age of ten years is about seven and a half inches. In this case it is ten and a quarter inches upon the left side and nine upon the right. The difference in the circumference in the middle of the arms is three quarters of an inch; in the middle of the fore-arms, two inches; and of the hands, one inch; all in favor of the left or sound side.

The hand is set in an everted position well up the fore-arm, the tip of the middle finger being four inches and a quarter nearer the elbow than upon the left side. Although thus distorted and so loosely attached that it can be brought at right angles with the line of the ulna, it is remarkably strong, and with it she is capable of executing almost any movement.

Articulated with the carpus is felt the lower end of the radius. In its proper place the head of the radius may also be felt, continuous with which, and extending down the fore-arm nearly to the hand, is a prolongation of fibro-cartilage, occupying the site of the excised bone.



Exactly where this new formation begins, and hence how much bone was removed by the operation, it is difficult to determine; but in regard to this, as well as the other points of interest which have been alluded to, you are invited to examine for yourselves in the patient whom I now present.

CASE OF GLIOMA OF THE PONS VAROLII.

BY JAMES J. PUTNAM, M. D.

The following case is chiefly remarkable for the fact that the symptoms remained so long in abeyance after the time of the probable onset of the disease, and that the impairment of functions was comparatively slight even up to within the last week, although, as will be seen, the lesions involved almost the entire thickness of the pons varolii.

The patient was a married woman, of about thirty-five years of age, of good antecedents as regards health, and no cause could be assigned for the disease from which she suffered. She was from first to last under the care of Dr. B. F. D. Adams, of Waltham, with whom I saw her in consultation, and who very kindly asked me to make the post-mortem examination, and allows me to report the case.

Dr. Adams's account of the case is as follows: —

Three weeks before he saw her the patient had an attack of erysipelas of the head, shortly after which the nervous symptoms first showed themselves.

These consisted at first in a slight dragging of the right leg, and some loss of power in the right arm, some disturbance of speech of a peculiar kind, which will be described at greater length below, and a very considerable degree of loss of sensitiveness of the right side of body and face, and right arm and leg. Over the right side of face this impairment of sensitiveness was so marked that a pin prick was scarcely felt until the median line was passed.

Three days after Dr. Adams's first visit the impairment of sensibility had also invaded the left side, and soon no great difference between the two sides was to be found, and the absolute impairment of sensibility had become less. There was at no time any loss of control over the sphincters.

The failure of muscular power was not so great but that the patient could walk and grasp any object, and that, too, with a strong grip, but the effort could not be sustained, and she found that objects were liable to drop from her hand.

The motor symptoms became slowly but steadily worse, and after about two weeks the left side became affected in the same way in which the right had been. She suffered considerable neuralgic pain in the right extremities, and had a sense of great coldness there, though the skin was, in fact, warm to the touch.

It was only for about a week before her death that she was obliged to keep her bed. The entire course of the disease, from the time of the appearance of the first symptoms until her death, was about eight weeks.

When I saw the patient her condition was as follows: —

On simple inspection nothing especial was noticed except a peculiar fixed look of the eyes, and that the face wore a mask-like expression. When she spoke she did so in monosyllables, and in very short, broken sentences, choosing expressions which would convey her meaning in the very shortest possible manner, though without actually miscalling words. Though

the words were not actually miscalled the speech strongly resembled that of a person with a greatly diminished or a very small vocabulary, such as a child, or even a patient with a slight degree of real motor aphasia. The lips moved but little, and the articulation was that of a person having pebbles in the mouth. The tongue deviated to one side, and could be protruded but a short distance.

The eyeballs could be moved in every direction, but nystagmus appeared when they were near the full limit of motion toward either side. There was no optic neuritis nor double vision. As for the muscular system of the body at large, every movement was possible, though all were very feeble, those of the right side particularly so. She was able to move her feet about, and even to walk, for that very morning she had fallen on the floor. The motion of the hands was weak and tremulous. The patient was in an emotional state, and several times during the examination she burst into tears without any special cause. No mention is made in the record of difficulty in swallowing, but at the time I saw the patient it is my impression that it existed to a moderate degree. Death occurred under an increase of all the paralytic symptoms.

At the autopsy the brain alone was examined.

The quantity of the ventricular fluid was increased to a moderate extent, but otherwise the brain appeared perfectly healthy except the pons varolii. The pons was markedly swollen in every dimension, and some of the transverse bands of fibres were actually forced apart by distention from within. The nerve trunks coming from it were softened. The impression given to the finger on palpation was that of an abscess covered by a soft and thin wall.

On transverse section across the middle of the pons the entire organ, with the exception of a narrow wall of tissue, was found to have been converted into a grumous reddish-gray, translucent substance, dotted with points of blood. This substance was so diffluent that it could be scraped or spooned out with ease, appearing like thick muco-pus. It was, in fact, taken at the first glance to be the contents of an abscess, though this idea was soon abandoned. In spite of its consistency it did not escape to any extent when the preparation was inverted.

The medulla, just below the pons, appeared healthy, though of diminished consistency.

On microscopic examination the growth proved to be a glioma. It did not appear to have taken its origin from any special point, but was surrounded in the pons by a rim of relatively healthy tissue, which at the level of the middle of the pons was upwards of one fourth inch in thickness for the most part. The true cells of the growth were mostly small and round, with but little protoplasm, though long spindle-shaped cells were also abundant. Besides these there were a great variety of cells, owing their form and appearance to the processes of inflammation and degeneration that were going on. The tissues were hardened in Müller's fluid.

Sections made from the parts immediately below the tumor itself showed evidences of infiltration with cells like those of the new growth, and in addition there were wide-spread signs of diffused subacute inflammation. Such were degenerated ganglion cells, numerous spider-cells in certain localities (especially just beneath the ependyma), enlarged and atrophied axis cylinders, and increase of the interstitial tissues. The anterior pyramids were degenerated, and, in fact, almost destroyed.

The diffused increase of the connective tissue was very marked throughout the whole length of the medulla oblongata. Even at the extreme lower end hypertrophied axis cylinders were scattered through the antero-lateral tracts, each surrounded by a broad circle of granular-looking substance, deeply stained with carmine, while the intervening axis cylinders had almost disappeared. It is impossible to say how far this secondary inflammatory condition extended down the spinal cord, since, no disease having been suspected there, that had not been removed.

I would not leave this case without saying one word more about the peculiarity of the patient's speech. Although the disturbance was not to be called really aphasic, yet it was certainly something more than articulatory (dysarthritic). Such words as were brought out were enunciated with almost perfect clearness, yet but few words, and those of the simplest kind, were attempted. It seemed, to say the least, as if the patient, painfully conscious of her articulatory disability, forestalled its manifestation by a careful choice of words. It is also possible that this blockage of the articulation may indirectly, and temporarily, inhibit or embarrass the patient's power of framing sentences, causing, as here, a semblance of aphasia. Thus, in a case recorded by Altdörfer (quoted by Nothnagel), in which the lesion found was a spot of hæmorrhagic softening in the anterior part of the pons, it is distinctly said that the patient, besides losing his power of articulate speech, miscalled his words. In another very interesting case reported to me verbally by a colleague, a difficulty "in finding words" was apparently present during the first few days after a manifest attack of embolism of one of the vertebral arteries, although later nothing more than the usual dysarthria was to be discovered.

THE SUPERIOR VALUE OF THE BROMIDE OF SODIUM.

BY HENRY M. FIELD, M. D. (N. Y.),
Professor of Therapeutics, Dartmouth Medical College.

MORE than ten years ago Dr. Edward H. Clarke in conversation with the writer, expressed his sense of the slight value of the bromide of sodium. That such was his established opinion would appear from the following extract from his published writings: "M. Voisin regards its" (referring to bromide of sodium) "physiological action and therapeutical value as equivalent, or nearly so, to the bromide of potassium. Dr. Amory has been led by his experiments to regard it as a less valuable therapeutic agent than the potassium salt. It possesses no decided advantages over the other bromides just named, and therefore it is not desirable to substitute it for them in the treatment of disease." I had a very high respect for Dr. Clarke's decisions upon all therapeutic questions, and, had I not already had an experience which led me to question his correctness on this point, I should probably have set aside the sodic bromide and contented myself with a more or less routine use of the bromide of potassium.

But every year since has the more confirmed my opinion of the superior value of the sodic salt; I have tried to observe carefully because I have to teach others

as well as form conclusions for myself. On the other hand, although druggists of wide observation, as the Gilman Brothers and S. A. D. Sheppard, have assured me that the relative sales of the bromide of sodium have greatly increased within recent years, yet my frequent observation of the practice of the profession satisfies me that physicians in general know very little of bromide medication except as accomplished by the bromide of potassium.

A physiological study of the two salts in question supports the following propositions: —

(1.) The bromide of sodium, because it is a sodic compound, should be more congenial, less disturbing, to the fluids and solids of the body than its potassic congener.

(2.) The sodium salt, in extended use, should be less depressing to the heart, all potassic salts after a time tending to produce cardiac depression.

(3.) The sodic bromide is less offensive to the taste, much less irritating to the stomach.

(4.) The bromide of sodium should have equal, if not superior, general therapeutic power with the bromide of potassium, since while the former has a bromine per cent. of 78, the latter has but 66.

To which, it may be added, my clinical experience has brought me to the following conclusions: —

(1.) The bromide of sodium has equal therapeutic power, throughout the entire range of medication (with possibly an exception), with that of the bromide of potassium.

(2.) Not only this, but the bromide of sodium has *superior therapeutic value*, both from the greater mildness of its physiological impression and because of additional therapeutic applications which, were we confined to the potassic salt, would be inconvenient if not impossible.

Perhaps my practical experience with the bromide of sodium can be best detailed by a brief discussion, in order, of my physiological propositions, with an explanation of the last clause of the second clinical conclusion. And, to refer to the first proposition, *what should be has been*, as respects the two bromides. An unfortunate bromide impression is not likely to be reached, is not so soon reached, and, if present, does not appear in so intense a form under the use of the sodic as from corresponding use of the potassic bromide. This applies to skin eruption and certain other features of bromism which will be mentioned a little later.

Secondly. Many authorities consider the continued use of any potassic salt in considerable quantities calculated to weaken the heart, not to speak of deleterious action upon the blood. I do not get this influence from the bromide of sodium as I believe I used to get it from the potassic bromide; for example, I do not consider the conjoined use of digitalis as important as I did when I used little else than the bromide of potassium.

Again, thirdly, there is marked difference between the bromides as concerns convenience of ingestion, and great preference to be given to the bromide of sodium. Foul tongue, fœtid breath, deranged digestion, anorexia, etc., are less common and less extreme under the continued use of the sodic compound. I have had these unfavorable conditions developed to troublesome extent, and seen them largely disappear, without necessity of suspending the bromide medication, — which it might have been hazardous to do, — by simple substitution of the sodic for the potassic bromide previously used. Indeed, in one case, the graver symptoms of cumulative action and toxic impression having been rather suddenly declared under the use of bromide of potassium, namely, a degree of aphasia and conditions simulating locomotor ataxia; here medication was hardly at all suspended, but substitution of the bromide of sodium was made, in equal quantity, and the unpleasant symptoms speedily disappeared. The difference in taste between the two bromides may be a matter of no little moment. As I have often said to my classes, I would challenge any one having a slight cold, — and so with sense of smell impaired, — having had set before him two specimens of chemically pure chloride of sodium and bromide of sodium to certainly determine by taste which was the medicine and which the culinary article.[1] A corresponding difference of impression, as regards the two bromides, is made upon the stomach.

On the other hand the bromide of potassium is sharp and stinging, and, although it be freely diluted, has much of the "urinous" taste which writers attribute to ammonium chloride. An already irritable stomach is quite sure to be irritated by it, but of this later.

Finally — waiving the fourth proposition aside from its assertion — we come to a few facts answering to the second clinical conclusion. And, first, bromide of sodium is preëminently the child's bromide as tannate of quinia is the "babe's quinine." It is much less disagreeable to the taste, and less likely to be objected to. In the case of the very young, children a few months or under two years of age, where small quantities of the remedy are all that is required, I have frequently followed the suggestion of the French, and seasoned the infant's food with the bromide of sodium instead of with common salt, for example, a few grains added to the bottle of milk several times through the day or at bed-time. The occasions when we must disgust the young with offensive and bulky remedies are far too many; it is a good thing to avoid them when we can. Again, the babe will seldom object to two or four grains of the sodic bromide in a teaspoonful of water, sweetened or not. The bromide of potassium is another matter altogether.

For nausea and vomiting of the adult, and especially in the nervous female, occasioned by whatever common derangement of stomach or reflected disturbance, I have found bromide of sodium in ice-water — a half drachm to the half tumbler — one of the most effective of remedies. It must, of course, be drunk slowly, a little at a time, as the stomach can receive it, and it is an essential condition that a little ice be kept in the solution until it is all taken. I remember in one instance treating effectively three such cases in the course of the week. They were all night calls, but I avoided going out by sending the bromide with instructions how to use it, and, in one case, also ice from my refrigerator. I know of no other one remedy, not even morphia, in minute doses, that will accomplish so much, and morphia may be objectionable on account of after-effect, which the bromide never is. I should despair of treating this class of cases with bromide of potassium; the taste would often insure its refusal almost before it had reached the stomach — in a case where the vomitive tract of impression and conduction

[1] Mr. Sheppard tells of a lady in the country to whom he had sent bromide of sodium, in accordance with a physician's prescription, and who angrily returned it, under the belief either that the doctor had trifled with her in ordering *common salt*, or that the druggist had blundered.

involves not alone the surface of the stomach, but also œsophagus, fauces, and even to the very mouth — or, if the stomach could be induced to receive it, its positively irritating effect would soon occasion its rejection, and leave the patient worse than before any medicine was taken. Similar criticism applies to the choice of a bromide for sea-sickness.

Whether bromide of sodium has equal power with bromide of potassium in the graver neuroses I am uncertain, and have not decided this question for myself by experience. Voisin's opinion, as cited by Dr. Clarke, has already been quoted, and few speak with equal authority upon anything concerning the therapeutics of epilepsy. Ramskill believes the medicinal power of the two salts, in respect of epilepsy, stands as three to two in favor of bromide of potassium. It may well be that as the potassic bromide is more foreign to the system, as already said, so it may be more powerfully alterative when set in opposition to a grave neurosis. The question is similar to that of the relative remedial power of the iodides of sodium and of potassium, and here observers are far from being in accord. But for the manifold conditions, presented by a general practice, which require recourse to bromide medication, as a simple hypnotic, either upon the single occasion or for repeated use, as a sedative and calmative in various nervous conditions, as an antispasmodic in mild chorea or pertussis, as a "comforter" (Clarke) in pneumonia and typhoid fever, as calculated to mitigate or remove the unfavorable impression made upon the sympathetic by opium and morphia, in all these and allied conditions I have found bromide of sodium capable of accomplishing all that could be accomplished by bromide of potassium, and frequently in a much more gentle, and kindly, and unobjectionable manner. Indeed, so emphatic has my experience been in this particular that whereas formerly I took up the sodic bromide with hesitation, the occasions nowadays are but few where I use any other.

REPORT ON GENERAL PHYSIOLOGY.

BY CHARLES SEDGWICK MINOT.

EXPERIMENTAL PSYCHOLOGY.

AMONG the recent changes in biological science there is perhaps none more significant than the acknowledged foundation of psychology upon a physiological basis, which is now in the process of slow construction, by the gradual collection of material by experiment. Wundt is one of the leaders in the new movement, to which he has given both purpose and opportunity by the foundation at Leipzig of his laboratory of experimental psychology, and the starting of a special journal under the title *Philosophische Studien*.

Kraepelin has given a comprehensive account[1] of a dozen of the more recent researches in this field, and his article we have utilized in the preparation of this part of our present report. For those who wish a general presentation of the aims and methods of this new branch of science, a general popular article by Wundt in the German magazine, *Unsere Zeit*, for 1882, may be commended. Besides this a quite active discussion has been going on between Wundt and Zeller, the latter maintaining that it is altogether impossible to measure psychical processes, but he has already beat a partial retreat, and his antagonist has rendered his position altogether untenable. Trautscholdt and Tischer have investigated the reaction time from auditory sensations, and Moldenhauer from olfactory sensation. The latter is entirely novel.

To determine the time when the sensation in the nose began in his experiments, Moldenhauer[2] had an arrangement for interrupting an electric current; this arrangement consists of a forked tube through which the odoriferous air was forced; one branch of the fork conducts the air to the nose, the other branch has a little aluminum plate over the end, which is blown up by the current of air, which is thus made to break the circuit; this was employed in the usual manner to mark on the registering apparatus. The time required by three different persons was, respectively, 236, 216, 482 thousandths of a second with camphor; with oil of bergamot the corresponding numbers are 288, 202, 364. These are of course the averages of numerous observations. These reactions are all considerably longer than with the other senses, as was to be anticipated. Indeed, if with the same apparatus the same individuals reacted not upon the sense of smell but upon feeling the current of air, the time was very much shorter. In the case of the first of the three about 0.08, in the third 0.15–0.28 seconds shorter. (Perhaps this long time is due merely to slowness with which the odor reaches the olfactory membrane. The same subject has since been investigated by Buccola.[3])

The last author, Buccola,[4] has also investigated the reaction time of two symmetrical spots on the right and left hands. Normally there is but a slight difference between them, but if one hand receives a lasting irritation (by putting a mustard plaster on it for twelve minutes) then on that side the reaction is quicker, being in one case 0.213 seconds before, but only 0.188 after, the application of the plaster, but for the left hand (the plaster having been on the right) the time was lengthened a little, by 0.007 seconds.

Finally may be mentioned that Buccola[5] has also made some exact measurements of the prolongation of the reaction time in maniacs and "Alkoholiker." Kraepelin's researches, which are no less interesting than those mentioned above, are more strictly psychological and are therefore omitted here.

CENTRES IN THE CORTEX CEREBRI.

In connection with the report of last year on general physiology, we venture to reproduce from *Science* the following notice of Professor Schiff's article in Pflüger's *Archiv*, vol. xxx., p. 212.

"As an appendix to an article on the irritability of the spinal cord, Schiff enters into a long discussion on the nature of the so-called motor centres in the gray matter of certain convolutions of the cerebral hemispheres. The article is too long and too polemical to be briefly abstracted, but it is well worth reading. Schiff points out, that with the single exception of Ferrier all experimenters (even including Fritsch and Hitzig) have given up the belief that the irritable areas are the motor centres for voluntary movements, and account for the phenomena following stimulation in other ways. Schiff's own belief is, that the so-called motor areas are but reflex centres, in which, during

[1] Biol. Centralbl., iii., 53.

[2] Moldenhauer, Philosophische Studien, i., 610.

[3] Buccola, Arch. ital., Malatie nervose, vi., 1882, p. 416.

[4] Buccola, Rivista di Filosofia scientifica, i., 1881.

[5] Buccola, Rivista sperimentale di Freniatria e di Medicina legale viii., 1881.

normal functioning of the body, tactile nervous impulses are reflected to the true and deeper lying motor centres."

SECRETION.

The important discovery of Heidenhain that the cells of the submaxillary gland undergo visible alterations during their secretory activity has opened the way to numerous similar investigations on other glands. One of the most recent of these comes from Prague, — Biedermann's research on the lingual glands of frogs.[1] The glands are follicular, their lower ends dilated; in the living state — they can be easily examined when the tongue is stretched out — the cells have an inner granular zone, and an outer hyaline zone next the membrana propria, — a difference like that described by Lavdowski in the orbital glands of dogs, and to be seen in the pancreas. Various reagents were tried for hardening and dissociating, but all change the natural condition of the cells. The granules of the inner zone are the source of the mucin, but are not the mucin itself. To call forth the extreme phenomena of secretion it suffices to irritate the glossopharyngeus of one side for three to five hours — it being unnecessary to include the hypoglossus. To prepare for the histological examination after the irritation the tongue was hardened in absolute alcohol and sections made. On one side there are the resting on the other the active glands. The former resemble the salivary glands of mammals: the cells are scarcely stained by carmine, the cell walls are very distinct, and between the gland cells proper the so-called "Stützzellen" can be seen. After secretion the glands are diminished in size; the height of the secreting cells is not changed, but they are narrower, the inner clear part of cell (granular zone) is replaced by a finely granular protoplasm, and the Stützzellen can no longer be well seen. Besides this extreme form various intermediate stages can be seen. The change in appearance is caused by the exit of the fine granules of the inner zone. No evidence was had to show that there was a production of new cells, or destruction of cells during secretion such as Heidenhain has observed in other glands.

Another important organ, the liver, has also been investigated as to its secretory action. Afanassiew has published a memoir[2] of considerable length, which contains the following results: It is unquestionable that all the liver cells in the lobuli participate in the formation of both the bile and the glycogen. If the bile secretion is increased (section of the hepatic nerves, feeding with albuminates) the cells become moderately enlarged, and contain between their protoplasmatic threads many fine sharply limited granules, which belong chemically to the albuminoids. The limits of the cells may be clearly seen, the nuclei are large and finely granulate. The capillaries are widened. The large content of albumen in the cells explains their power of withstanding concentrated caustic potash. The liver feels resistant and hard. When on the other hand the formation of glycogen is greatly increased, all the cells are enormously enlarged; their outlines very sharply marked; in their substance are imbedded so numerous amorphous particles of glycogen that the substance of the cell is reduced to a coarse net-work of threads stretching from the nucleus to the periphery. The nucleus itself generally lies towards the middle of the cell and contains only scattered granules. The blood capillaries are constricted by the swollen cells. The organ as a whole is strikingly soft and mellow, and of a muddy color. In consequence of the small amount of albuminoids they contain the cells are quickly disintegrated in concentrated caustic potash.

When we consider that the increase in the secretion of bile is connected with an increased flow of blood, it becomes evident that a great accumulation of glycogen must diminish the secretion of bile. In fact Spiro found that if carb-hydrates are added to a meat diet, the increased flow of bile during the digestion is delayed.

Afanassiew experimented principally on dogs; Langley has studied these processes in the lower vertebrates, mainly amphibia,[3] but has directed his attention chiefly to the minute structure of the liver cells.

INFLUENCE OF THE SPLEEN ON THE FORMATION OF TRYPSIN.

In 1862 Schiff published a long series of experiments, which led to the result that the pancreatic juice lost its power of digesting albumens, after extirpation of the spleen. After the publication of Heidenhain's observations on the presence of the granules of zymogen in the pancreas, and their conversion into trypsin, consideration of the fact that the dilatation of the spleen stands in direct relation to the formation of trypsin led Herzeń to the theory that the spleen furnishes the ferment which converts the zymogen into trypsin. A few experiments to test this were reported in 1877, and he now publishes others.[4]

The experiments consisted in preparing three extracts: (1) of the pancreas with boric acid, which is preferable to glycerine, the pancreas being taken from a hungering dog; (2) infusion of the spleen from the same dog; (3) infusion of the spleen from a second dog in full digestion. The digestive power of (1) alone, of (1) and (2), and of (1) and (3) was then tested with fibrine and albumen. It was found that the most rapid digestion was effected by the pancreas extract mixed with the extract from the spleen during digestion, whence Herzen concludes that the pancreatic zymogen is converted into trypsin by a ferment furnished by the spleen during its periodic dilatation.

EFFECTS OF THE INTERNAL USE OF TURPENTINE ON THE URINE.

H. J. Vetlesen reports some observations on the effect of the internal use of turpentine on the urine, which, as they have a bearing on the determination of the sugar contained in the renal secretion, deserve mention here. It was first noticed that after taking turpentine the urine gives the sugar reaction with Almén's alkaline bismuth solution. More exact observations show that under the circumstances stated there appears in the urine a reducing substance (equivalent to 0.76% — 0.35% grape sugar). It resembles but cannot be identified with grape sugar, because it is not polarizing towards light, and can be destroyed by a small amount of hydrochloric acid. It is probably a fermentable sugar, but needs to be isolated and further studied. The experiments also indicate that after continued use of turpentine the amount of this substance dimin-

[1] Sitzungsber Akad. Wiss. Wien., Abth. 3, Bd. lxxxvi., p. 67.
[2] Pflüger's Archiv, xxx., 385.
[3] Proceedings of the Royal Society, London, No. 220, 1882.
[4] Alex. Herzen, Ueber den Einfluss der Milz auf die Bildung des Trypsins, Pflüger's Archiv, xxx., 295.

ishes, so that one is led to suppose that the organism becomes habituated to the drug. The original article is in Pflüger's *Archiv*, vol. xxviii., p. 478.

RELATIONS OF THE THORAX AT BIRTH.

A few years since Bernstein asserted[1] that after the first inspiration the thorax of the new-born child acquired a new set, causing an enlargement of the chest, and consequently producing the aspiration of the lungs. Hermann now attacks this view. The position of the fœtus in utero, the arms crossed in front and the back curled up, produces an extreme expiratory disposition, which would, of course, cease at birth. This is the only enlargement actually occurring. Bernstein has shown that there is no aspiratory pressure, holding the lungs expanded against the thoracic walls, in the fœtus. Hermann now shows that if a manometer is connected with the chest of children, having died when a few days old, that is, after having breathed for some time, that there is still no aspiratory pressure, hence there is no occasion to account for the development of such a pressure at birth. It is developed only later, probably as a consequence of growth. Bernstein found such a pressure because he blew up the lungs from the trachea and allowed them to collapse; Hermann states that this produces an aspiration otherwise not present. Our author further discusses the advantages to the child of its respiration without aspiration, and to adult man of his respiration with it. For the various conditions of the lung he proposes the following terms: "anectatic" for lungs containing no air; "protectatic," collapsed but containing air, as in pneumothorax; the air in a protectatic lung is the "minimal air." It would be interesting to study the development of the aspiration after birth.

A PHOTOMETRIC BACTERIUM.

Th. W. Engelmann, of Utrecht, has found a small organism with a flagellum at its anterior end, which he has named *Bacterium photometricum* on account of its extraordinary sensitiveness towards light. Thus if a number of them are brought under a cover glass, the whole of which is kept dark except one spot through which the light passes, then they will gradually accumulate in the light spot, and it can be seen that although they may pass from the dark to the light, they cannot go the other way, for the instant they reach the darkness they make a sudden backward start, which brings them into the light again. They are colored, and when examined spectroscopically it is found that they absorb the orange-yellow part of the spectrum. If now a small spectrum is thrown upon these bacteria in the field of the microscope, it is seen that they accumulate in just this orange-yellow band, precisely as they before accumulated in the light spot. But there is another still more marked gathering in the ultra red portion of the spectrum.

Engelmann has utilized this fact to test[2] whether we cannot perceive the ultra red rays merely because the media of the eye cut them off, or whether they reach the retina without causing sensation. For if the media cut off the ultra red rays then from a spectrum of light, which has passed through those media, those rays would be cut off and the bacteria would not accumulate in that portion of it. Experiment shows that the bacteria under those conditions do still gather in the ultra red, those rays therefore do pass through the media of the eye. We must therefore assume that they are not seen because the retina is not sensitive to them.

[1] Pflüger's Archiv, Bd. xvii., p. 617.
[2] Engelmann, Pflüger's Archiv, xxx., 125.

BACTERIA IN HEALTHY BLOOD.

There appears to be not much question that bacteria may be living in the tissues or in the blood or lymph without producing necessarily noticeable disturbances. Olivier and Richet are stated to have examined 150 fish of various genera and species, and found in all cases microbes in the blood and lymph. They regard their occurrence in these hosts as normal.[3] Mitrophanow[4] has maintained a similar thesis in regard to two parasites, which he has described from two genera of fishes, and referred to the genus protomonas. I am inclined to think that Mitrophanow's parasites are allied with the bacteria, and not with the protozoa.

An extreme form of the theory that bacteria, etc., are normally present in the healthy state is the belief that they are essential to the digestive processes. Béchamp[5] has gone beyond this, asserting that the granules in the liver and pancreas are really microbes, which pass out into the secretion. The total lack of foundation for this view, and the unscientific character of Béchamp's article, is well shown up by Johannes Frenzel.[6]

It has, however, been shown by recent investigations that certain animals and plants may live together to their apparent mutual benefit. Thus the green bodies occurring in various animals have been discovered to be plants cells, living in the body of the radiolarian, hydra, or what else it may be. Both organisms seem to be benefited by this association, to which the name of *symbiosis* has been given. It thus appears that there are no animals really having chlorophyll in themselves.

[3] Comptes Rendus, Academy Paris, 1883.
[4] Mitrophanow, Biol. Centralbl., iii., 35.
[5] Béchamp, Arch Physiol. Norm. Path., October, 1882.
[6] Frenzel, Biol. Centralbl., iii., 49.

Hospital Practice and Clinical Memoranda.

FEMALE HOSPITAL, ST. LOUIS.

J. B. SHAPLEIGH, M. D.

A CASE OF PUERPERAL CONVULSIONS.

THE following case of puerperal convulsions was kindly furnished me by Dr. Willis Hall, in whose practice it occurred.

Rosie L., German, aged eighteen, of stout, robust frame, and in good health. Menstrual functions normal. Labor began at nine P. M. October 29th. Was first seen by Dr. Hall at six A. M. October 30th, when he learned that she had had a convulsion, from the account given by the nurse probably epileptic. The vertex presented in the third position, and the os was found slightly dilated. Fifteen grains chloral hydrate per rectum were ordered. She rested quietly under the chloral until 8.30 A. M., when she had another convulsion, which was recognized as puerperal. There was another at nine, and one at ten A. M. These invariably commenced by twitching of the palpebral muscles, succeeded by a drawing up of the corners of the mouth and general tonic contractions, followed by clonic movements. At this juncture twelve ounces of blood were taken from the arm. Patient had another

convulsion at 11.15 A. M., followed by five more between twelve M. and one P. M.; paroxysms increasing in severity all the time. At this time, after drawing off fourteen ounces of urine, forceps were applied. During delivery she had another convulsion, which chloroform did not control. Child was soon delivered, and patient rested quietly till 2.40 P. M., when she had another convulsion. One third grain morphia sulph. was given by hypodermic injection, and chloroform was cautiously and continuously given till eight P. M., when the morphine was repeated.

There was some slight hour-glass contraction of uterus, but it was easily dilated, and placenta removed piecemeal, after which one grain ergotine was given hypodermically.

October 31st, 7.30 A. M. No convulsions so far; sleeping quietly. At four and eight P. M., same; still sleeping.

November 1st. Rested quietly all night, and awoke refreshed. Took nourishment well at intervals of two hours through the day.

From this time on patient improved steadily and rapidly, her convalescence being delayed by retention of urine for two days. No albumen found in urine. It was learned afterward that patient had had very severe headache for three or four days prior to confinement.

ANEURISM OF THORACIC PORTION OF DESCENDING AORTA.

Rosa D., colored. Patient entered the hospital on July 3, 1882, complaining of great pain under left arm, and radiating down its under surface. This pain is paroxysmal and very severe. No cause can be found for it, as both heart and lungs yield normal auscultatory signs. She denies any syphilitic history, but has undoubtedly had the disease, and it was at first thought that there might be some syphilitic growth pressing upon the axillary nerves. Iodide of potassium was given in large doses with temporary relief, but the pains soon became as severe as at first, and seemed to have a periodicity about them suggesting malarial neuralgia. Quinine yielded good results for a few days, but then lost all power over the trouble.

The case continued about the same, morphia being given as needed to subdue the pain, till the first week in August, when she had a slight cough and a slight pulmonary hæmorrhage. Auscultation at this time reveals only a slight thrill on respiration on right side, with some increased vesicular murmur in both lungs. The cough disappeared entirely by the 15th of August, but there remained a little difficulty in breathing. General condition gradually becoming worse.

August 25th. Patient had another small hæmorrhage early this morning. Percussion unduly resonant anteriorly on left side, and dull behind. Right side normal, but of high pitch. Auscultation gives a murmur of greater intensity than normal over the chest, except posteriorly on left side, where it is very weak. Find great difficulty in breathing, and the subcutaneous tissue about left supra-clavicular region and upper part of chest presents considerable serous infiltration. There is also this morning a pulsating tumor, which can be covered with the hand, situated between right scapula and the spinal column. Patient states that the difficulty of breathing and swelling about neck came on suddenly during the night, and the tumor was not present at yesterday's examination. The tumor has no thrill or murmur, but the diagnosis of aneurism of the aorta was made, and the dose of iodide increased as much as patient could tolerate. This was one drachm three times a day. Patient gradually grew weaker and more emaciated, but with no appreciable growth in the tumor, which has now become very painful, until the 30th of August. On visiting patient this morning she was found completely paralyzed from the waist down. Bladder and bowels entirely without control. On raising patient to a sitting posture to examine the tumor a decided lateral curvature of the spine, with its convexity to the left, was noticed. Patient complains of great pain when moved. It was supposed that the sac had produced necrosis of the vertebræ, and was now pressing upon the spinal cord.

Patient gradually sank, with no change in the local conditions, except swelling of left hand and arm, until October 9th, when she died.

On post-mortem examination an aneurismal sac was found encroaching on the upper portion of the anterior mediastinal space, and pressing the left lung forward. Heart itself and right lung normal. The sac began just beyond the origin of the left subclavian artery, and extended to within about two and one half inches of the diaphragm. It was about three and one half or four inches in diameter, with its largest part just at the descending portion of the arch. The sac was firmly bound to the chest walls, and where it crossed the vertebral column had completely destroyed the bodies of the vertebræ and pressed upon the cord. It was impossible to remove it without great mutilation of the body, which was not permitted.

The case is remarkable for the vague and indefinite symptoms at the beginning, their sudden appearance, and the size of the sac. I forgot to state that this was filled with soft post-mortem clots, but only contained a few small ante-mortem ones, and these of recent date.

NOTES ON A CASE OF PLEURISY WITH AN UNUSUAL AMOUNT OF EFFUSION.

BY A. B. DARLING, M. D. HARV., KILLINGLY, CONN.

ON January 14, 1882, I was called to see Mr. L., a hardware merchant, sixty-three years of age. He is a stout, well-built man, six feet in height, weighing about one hundred and eighty pounds. He had been treated for five weeks previous to my first visit by a quack for "liver complaint." His history was that of subacute pleurisy, commencing with pain in the right side, but at no time severe enough to prevent him from attending to his ordinary avocation.

The pain soon disappeared, while the gradually increasing dyspnœa and loss of strength obliged him to relinquish his business.

On my first visit I found him sitting up, countenance pale, marked dyspnœa upon exertion, slight hacking cough, no expectoration, not much appetite, tongue coated. He could lie only upon his right side. On examination of the chest complete flatness was found extending as high as the clavicle upon the right side. The normal vesicular murmur was absent throughout the entire lung. Bronchial respiration was heard only in a small space over the scapula. The movements of the chest during expiration were irregular, the right following the left. The intercostal spaces were pushed

out to a level with the ribs. The right side measured one and one half inches more than the left from the centre of the sternum around the chest to the centre of the spine. Thoracentesis was proposed, but the patient would not consent.

For the next two weeks the patient was treated with blisters to the affected side, diuretics, iodide of potash, and chloride of iron. After the first week the diuretics failed to have any effect, the patient remaining about the same. Thoracentesis was performed on the 29th, with the aspirator, and *nine* pints of serum were withdrawn. The aspirating needle was inserted between the eighth and ninth rib just below the inferior angle of the scapula. The patient was sitting during most of the operation. He suffered but little distress from cough or dyspnœa during the entire operation, which lasted about an hour.

The pulse after the operation was irregular and intermittent. Ordered brandy freely.

January 30th. The patient passed a restless night, suffering from frequent attacks of dyspnœa. Pulse 90. Complained during the day of tightness about the chest and difficulty of breathing.

January 31st. Patient rested better last night.

February 5th. Patient is quite cheerful and feels much better. Pulse 80, tongue clean, appetite improving, rests quite well, and complains less of distress of breathing. Slight vesicular respiration can be heard over a space about three inches in width at the right of the spine, extending as low as the sixth rib.

February 19th. During the third week the patient has had no attacks of dyspnœa; can lie upon his left side about an hour at a time; respiration and general condition much better. Nothing further of note occurred in the history of the patient until the 6th of May. Meantime he had been able to walk and ride out in pleasant weather.

May 6th. Did not sleep any last night, being unable to lie down on account of the shortness of breath. Pulse 125, feeble and irregular. Upon examination of the chest found dullness extending as high as the spine of the scapula. No respiration could be heard throughout the area of dullness. Thoracentesis was immediately performed, and one pint of clear serum was withdrawn. Gradual improvement followed the last operation. He has been able to attend to his business since July. The resonance of the two sides is nearly the same.

According to our most eminent authorities I should have made more than one operation in withdrawing so large a quantity of serum. In this case there were no bad symptoms to contra-indicate the completion of the operation. I attribute this to the slow withdrawal of the fluid, thus allowing the heart and lungs to be gradually relieved from the pressure of the fluid.

— A writer in the *Edinburgh Medical Journal* for April recommends chromic acid as superior to any other treatment for venereal warts. One hundred grains of the acid to one ounce of water is a sufficiently strong solution for ordinary cases. The warts should be carefully dried before the acid is used, and afterwards dry cotton-wool applied. Chromic acid efficiently takes the place of ablation by the knife or scissors, and has the advantage of being a bloodless method, and much less painful.

New Instruments.

A NEW TONGUE DEPRESSOR.

BY W. THORNTON PARKER, M. D.,
Acting Assistant Surgeon U. S. Army.

IT is a matter of very general complaint that most of the tongue depressors now in use are clumsy and heavy for the operator and needlessly disagreeable for



the patient. Their form is also an obstacle to their cleanliness. Many of them are even dangerous and capable of conveying disease. I would therefore recommend the new tongue depressor made for me by Messrs. Codman & Shurtleff, of Boston, Mass., which I think is very much more desirable than those already in use. It is made of wire, nickel plated, the size used in Sims' (wire) speculum for general use, and of smaller wire for use with children. It is light and capable of being readily cleansed, is convenient for the operator, and not disagreeable to the patient. It is held in the right hand between the thumb and forefinger, the second finger between the wires, and the last two fingers to the right of the instrument. The motion is made by the closing of the fingers, and no force is required, only gentle pressure with a slight drawing forwards.

FORT ELLIOT, TEXAS, *April* 5, 1883.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY,

APRIL 23, 1883. DR. CHARLES D. HOMANS presided.

THE PRESIDENT reported a case of

MEDULLARY CARCINOMA.

A gentleman, sixty years old, June 25, 1881, came to me to have a small, immovable tumor removed from his scalp, about six inches above right eye. He was quite bald, and the little tumor, the size of half a filbert, resembling a wen, attracted attention. It was situated under the periosteum, and was exceedingly vascular, so that it was necessary to use strong pressure to control the hæmorrhage. Unfortunately the tumor, being adherent to the bone, and being removed piecemeal, was thrown away, and so was not examined microscopically. I told his wife that the tumor would probably return.

I saw him again about September 20th. The tumor had returned, as I feared, and was about the size of a pullet's egg, and semi-solid to the feel, with enlarged blood-vessels over its surface. He was very desirous to have another operation done, so on September 28th I made an incision with the intention of dissecting the morbid product from the bone, but hæmorrhage became so great that I was obliged to desist. The same reason prevented my obtaining a portion for microscopical

examination. On passing the finger into the wound rough edges of bone were felt, and it was evident that the skull was involved in the disease. Some vessels required ligation, and pressure was applied to the wound after the edges had been drawn together. Six or eight hours afterwards there was some more blood lost, but additional pressure soon caused it to cease. The wound healed kindly, and the tumor continued to increase slowly but steadily. At the time of this operation a swelling was noticed in the region of the thyroid gland, which I considered as probably of the same nature as that on the head. About January, 1882, he noticed a swelling at the top and outside of the crest of the right ilium, which gradually increased in size, and interfered with his walking. Since July there has been a similar swelling at about the same point over the left ilium, and within the past three months a small swelling has been noticed in one of the ribs over the heart. He slowly lost health and strength, but was not confined to his room save for the last few weeks of his life. The tumor on his head grew as large as a very large orange; it had many blood-vessels over its surface, and those in its neighborhood were very much enlarged and tortuous. Pulsation in the tumor was at times very perceptible. His mind was quite bright till towards the end of life, though at times he wandered in his speech. The tumors about the pelvis also grew slowly, and became quite large, but not projecting like the one on the head it was impossible to estimate their size. The one in the neck was not very prominent, but grew so as to affect his respiration and his power of swallowing. At one time a piece of meat stopped in his gullet, and was removed by Dr. Sabine, who lived in his neighborhood, and who ministered to his comfort many times during his long illness. Once, certainly, four months ago, there was a serious hæmorrhage from his mouth, but it never recurred to any amount. After the attack of choking mentioned above he lived principally on liquids, though sometimes he could swallow very finely cut up solid food. These tumors were never tender to the touch, nor painful save that for the few weeks just before death he complained of pain about the right ilium. For ten days before his death he was wholly confined to his bed, suffering from shortness of breath and pain in the back part of his neck on attempting to move his head. This was followed by loss of consciousness.

DR. E. G. CUTLER, who had made the autopsy, said that the death of the patient was caused by croupous pneumonia of the entire right lung, which on section was found to be in a condition of gray hepatization in the middle portion, with beginning resolution at the root of the organ, and red hepatization in the upper and lower portions, the entire lung being solidified.

The chief interest attached to the tumor on the head. On section it was found to be of a pearl-gray color, very vascular, and to extend entirely through the skull, and to depress the dura mater in such a manner as to flatten the convolutions of the brain underneath. It had extended through in one small area, and had contracted adhesions to the pia. The flattening extended nearly as far as the fissure of Rolando behind, and in front went well to the anterior extremity of the cerebrum. From the cut surface a milky juice exuded, and the tumor was then seen to be distinctly lobulated.

Secondary nodules were found in the left lung, of small size, and scattered pretty generally throughout the organ. The largest nodule was the size of a Lima bean, the smallest no greater than the head of a pin.

The cause of the dyspnœa and difficulty in swallowing was found to be the tumor of the thyroid, which was quite large, and had broken through into the trachea behind and at the side, and also extended into the œsophagus, forming an outgrowth five centimetres long, and as large as the thumb. It had thus very considerably encroached upon the lumen of the trachea.

Secondary tumors were found in the distal end of the left fourth rib, and in the crest of each ilium, in the latter situations forming tumors of some size.

The tumors were all lobulated, soft, grayish-white, very vascular, with here and there hæmorrhages into them. A milky juice was easily made to flow from the cut surface, which on microscopic examination was found to contain epithelial cells, with very large nuclei and nucleoli, the prevailing type of the cells being columnar. On section under the microscope there was a slight stroma, with thin, delicate trabeculæ, very vascular, forming large, oval alveoli in which lay the epithelial cells above mentioned. The tumor in the thyroid was evidently the primary growth, which was medullary carcinoma.

DR. E. H. BRADFORD read the regular paper of the evening, on

CASES OF RHEUMATIC CURVATURE OF THE SPINE,

in which he reported two cases of anchylosis of the spine following gonorrhœal rheumatism. Although the other joints had been involved in the acute attacks they had escaped any permanent injury. The spinal column, however, in both cases was stiff in its whole length; the ribs also were anchylosed in their articulations to the spine. A third case of chronic rheumatic arthritis of the spine without gonorrhœal origin was reported.

DR. CUTLER said that a case mentioned by Dr. Bradford as having been seen with him has been under observation three years. She has had acute rheumatism, and has received anti-rheumatic treatment, but is now the picture of health, though with an ungainly walk. The curve is, if anything, a trifle worse.

DR. MINOT remarked that the use of the term gonorrhœal *rheumatism* was misleading, inasmuch as there is no reason to believe that the affection is rheumatic, and in fact it bears no resemblance to rheumatism except that there is pain and swelling of a single joint. The theory that the disease comes from an irritation of a spinal trophic centre by reflexion from the inflamed urethra is more plausible, though not demonstrated. In this respect it resembles the joint complications of tabes dorsalis, only the joint is not permanently disabled as in the latter disease, the primary irritation being of limited duration.

DR. BRADFORD said that the term gonorrhœal rheumatism is undoubtedly incorrect, but it is convenient as it describes the disease better than any other term in common use. The cause of the joint complication in gonorrhœa is something that is not yet proved. It is possible, perhaps probable, that there is some central trouble, but it is premature to state it as a fact.

DR. WADSWORTH spoke of cases of gonorrhœal rheumatism that come under his observation in connection with gonorrhœal conjunctivitis and inflammation of the cornea, as resembling synovitis, that is, there is fluid in the joint with redness. Such cases

are very different from those of permanent stiffness recorded by Dr. Bradford.

DR. BRADFORD said that stiffness from gonorrhœal rheumatism is not uncommon.

DR. WATSON referred to a paper in the *Deutsches Archiv*, No. 8, 1882, by Von Nolen, who had made a thorough analysis of 116 cases, and who concluded that all theories must be rejected; that the nature of gonorrhœal rheumatism is unknown, but that a single case cannot be distinguished from rheumatism in any way.

APPEARANCE OF ALTERED BANANA IN THE DEJECTIONS.

DR. EDES showed a specimen from a copious, black intestinal discharge, resembling writing sand, and also a section of a banana exhibiting reddish lines festooned around the centre. He said that a year or two ago he was shown certain reddish, stringy masses discharged from the intestines of a boy, which the attending physician, who had mounted several specimens for the microscope, suspected might be the eggs of some parasite. They were composed of irregularly oblong or oval blocks of a garnet-red color, and were seen under the microscope to be here and there accompanied by spiral ducts. The opinion was expressed that they were of vegetable origin, and further inquiry determined that they came from the banana. The black sand, after a little soaking, proved to consist of these same vegetable cells, which are transparent and white in the fresh fruit, but which on exposure to the air, treatment by acid, and apparently by sojourn in the intestinal canal, become darker and darker red, and finally, when dry and hard, black. The cells appear to be arranged in double rows with a spiral duct between. After alteration by keeping or by acids, they may be broken by pressure of the covering glass and split into angular fragments, which would possibly indicate that their contents are a resin.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR OBSTETRICS.

JOHN B. SWIFT, M. D., SECRETARY.

DECEMBER 27, 1882. DR. J. R. CHADWICK read a paper entitled

CASES OF CONGENITAL AND ACQUIRED STENOSIS OF THE FEMALE GENITAL TRACT.

DR. FARLOW said he had assisted Dr. Chadwick in the case where the stomach had been tapped. That before tapping examination showed the abscess to be in front, a little to the right of the median line and above the pubes. At the second tapping there certainly was gastric juice in the material obtained, as well as substances which had been taken into the stomach. He supposed that after the original tapping the abscess cavity had contracted and the stomach had been dragged down.

DR. LYMAN said he did not understand whether in the first tapping, by the aspirator, through the abdominal wall the stomach had been entered or the abscess.

DR. CHADWICK said it was the abscess, and all the pus was withdrawn. At the second tapping evidently the stomach had been crowded down and had been mistaken for the original abscess partially refilled.

DR. LYMAN asked why it was not a perinephritic abscess which had been tapped per vaginam.

DR. CHADWICK said he did not consider it a perinephritic abscess as there was no pus in the urine originally. It was looked for a number of times, but did not appear until a short time before death. There was no swelling in the lumbar region, but it was all in front.

DR. LYMAN said that perinephritic abscesses pointed anywhere, and were not entirely confined to the lumbar region.

DR. DUNN said when he had first seen the case, about six years ago, there was a swelling in the side above the crest of the ilium, which he had taken to be a pelvic cellulitis.

DR. FARLOW said he had been much pleased with the use of the permanganate of potash as a disinfectant. It had relieved the symptoms in the same way that carbolic acid does.

In reply to a question DR. CHADWICK said he used quite a weak solution. He could not tell the exact strength, but the fluid was the color of claret wine.

DR. MCCOLLOM said he had found it necessary to use a rather strong solution, and asked if it acted as well as a solution of thymol. He had seen a statement that the permaganate was an excellent deodorizer, but did not kill the germs as carbolic acid and thymol did.

DR. DUNN said he thought the permanganate would deodorize a wound, but would not render it aseptic as carbolic acid would.

DR. KINNEAR asked if clinically in septicæmia the permanganate did not act antiseptically?

DR. CHADWICK said he had always thought so. In cases of septicæmia he had used it and found it worked as well as the other antiseptics.

DR. STRONG said he had seen the same statement which Dr. McCollom had referred to; but he thought the permanganate oxidized the clots, etc., in which the bacteria lived and so rendered them uninhabitable. Therefore although it was not a germicide it prevented them from living as it deprived them of their food.

DR. FARLOW said he thought if the amount of carbolic acid necessary to kill the bacteria had been injected into the stomach it would have killed the patient. Certainly in this case the permanganate answered every purpose.

DR. BURRELL asked, in looking back over the case, if a free incision through the abdominal walls originally would not have been better, that being simpler and safer than puncture through the vagina.

DR. CHADWICK thought the abdominal incision instead of being simpler and less dangerous would have been more so, as probably the intestines were between the abscess and the abdominal walls. The stomach also, probably, would have been in the way, as undoubtedly it was enlarged, judging from the enormous amount of food which the patient took.

DR. FARLOW agreed with Dr. Chadwick, saying that the abscess was certainly discharging into the intestines; fluctuation could be felt through the vagina, so this seemed to be the direct route.

DR. LYMAN asked if the uterus was of normal size in the case of retained menses, and said that usually in such cases the uterus was very much dilated.

DR. CHADWICK said he could not be sure, but thought that the uterus was of normal size. The va-

gina was enormously distended. As he allowed the fluid to drain away slowly the uterus may have contracted, having been enlarged originally.

Dr. Garland asked if in these cases the retained fluid comes from the uterus or vagina. If from the uterus he thought the blood would find its way back on account of the great pressure which must be exerted.

Dr. Kinnear thought the reflex action, from the irritation in the vagina, would keep up uterine contraction.

Dr. Garland said he did not know of any contraction of muscular fibre which would continue constantly without any relaxation.

Dr. Lyman asked the character of the fluid, and if there were any clots.

Dr. Chadwick said it was the regular thick, viscid, chocolate-colored fluid characteristic of these cases, and asked for an expression of opinion as to the best method of preventing septicæmia in such cases. He thought the method employed in his case would certainly keep the cavity aseptic. The mortality of the reported cases, except those of Emmet, had been very large.

Dr. Lyman said if one could know beforehand that the uterus was not distended a free incision through the hymen would be best. Authorities differ, and four methods of operating are given, namely: (1) aspirator; (2) trocar and tube; (3) free incision; (4) free incision and disinfecting. He thinks the secret of success is in keeping the parts thoroughly disinfected.

Dr. Chadwick thought daily disinfectant injections would not thoroughly disinfect and keep the cavity aseptic as well as the method employed, where all the air was excluded.

Dr. Lyman asked if the effusion could have been due to a hematocele.

Dr. Chadwick said it could not, as there was no evidence of any such thing.

NEW YORK MEDICO-LEGAL SOCIETY.

At a meeting of the Medico-Legal Society, held May 1st, Mr. George B. Corkhill, United States Attorney for the District of Columbia, read a paper on

INSANITY AS A DEFENSE FOR CRIME,

in the course of which he said that he did not believe that a more efficacious and just and proper punishment could be found than the prompt execution of a criminal if found guilty of the crime which under the law merited that punishment. He did not think that insanity should ever be allowed as a plea of defense for crime on the trial of the prisoner under the indictment, but said that his candid opinion, resulting from a very large experience in the trial of these cases, was that when a prisoner proposed to defend his crime on the ground of insanity a jury ought to be specially chosen for their fitness to try the special plea, and that if the prisoner was found insane he should then be confined in an insane prison for a certain time commensurate with the character of the crime, while if the verdict of the jury were in favor of his sanity that the plea should not be allowed on the trial of the cause. After speaking of the characteristics of the class of individuals lately designated under the name of "cranks," he went on to say that they figured largely in the list of criminals accused of all grades of crime, and that it was to them that belonged the disgrace brought upon the plea of insanity as a defense for crime. With them, he thought, judgment and execution should be swift and certain, since the escape of one of these men encouraged the entire class to go on committing crimes for like notoriety and like exemption. They well knew that they committed crime and deserved punishment, and when the knife of justice fell upon one of their number it struck them all with horror, but to every honest citizen it was a glad announcement that the law was supreme, and that its execution could not be avoided by a miserable scoundrel claiming to be a crank. In conclusion he said "Society must be protected, human life must be safe, property must be secure, and the law must punish those who violate the sacred rights of each citizen to life and property. To do this with even justice it will not do to permit a criminal on account of the vagaries of an unbalanced intellect or moral nature to escape punishment. If the disease of insanity really exists, then let that question be determined, not that he may escape punishment, but that the punishment may be tempered in accord with his physical and mental condition."

Ex-Surrogate Calvin said that there was a class of physicians who had been so long attending on the insane that they came finally to consider all men insane, and the speaker of the evening had been so long pursuing criminals that he had come to consider that all men indicted for crime should be convicted. He was glad that the paper had been read, but the manner and spirit of its delivery, he thought, was characteristic of the paid advocate of the people, bound to convict the prisoner in obedience to the will of the people, all clamoring for his execution.

Dr. O'Sullivan thought that if the address of Mr. Corkhill should go out to the public it would do incalculable injury. There was already a prejudice against what is called expert testimony, and this paper, coming from so high an authority, would intensify it.

Dr. Ralph Parsons stated that while he agreed with what Judge Calvin had said as to Mr. Corkhill's manner, in regard to the main issue he was heartily in accord with him. He thought that when a question of insanity was made an issue it ought not to be made a part of the general case, but should be offered as a special plea to be decided upon by itself.

There was quite a prolonged discussion of the paper, in which Drs. R. O. Doremus and A. E. MacDonald and others took part, the speakers generally being of the opinion that the question of an indicted person's sanity, when insanity was offered as a defense, should be first decided by a jury of experts, and that if he should be decided to be insane he should be confined in a special prison for the insane.

Recent Literature.

Transfusion. Its History, Indications, and Modes of Application. By Charles Egerton Jennings. London. 1883.

This little monograph considers briefly the history of transfusion and the indications for its use. Its advantages in ante-partum hæmorrhage are particularly dwelt upon. The author considers it very important

in these cases that the uterus should expel the child by its own efforts, and regards transfusion as a powerful auxiliary in stimulating the uterine contractions.

The new matter in the book is the description of the author's apparatus for performing transfusion. This consists essentially of a siphon of rubber tubing, which conveys a saline solution from a reservoir to the patient's vein. To provide for immediate transfusion a branch may be joined to the main tube, through which the blood of another person may be mingled with the saline current.

A probe-pointed canula, with eccentric opening, for insertion in the vein of the recipient, and a trocar and canula for opening the vein of the blood-donor, complete the apparatus.

This siphon is stated to have been many times successfully used at the London Hospital in the transfusion of saline solutions, but the author does not state whether his method of immediate transfusion has succeeded in practice. A most valuable addition to the book is a bibliographical index of the more important works extant upon the subject of transfusion.

Medical and Surgical Journal.

THURSDAY, MAY 3, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

TYPHOID VERSUS TYPHUS FEVER.

THE Massachusetts Legislature, on the recommendation of the Committee on Public Health, has just passed a bill which reflects but little credit on the medical members of that committee. A bill has been enacted, at the request of some of the railroad companies, which forbids the remains of persons dying of certain contagious diseases being transported through the State without previously being so encased and prepared as to preclude any danger of communicating the disease to others by its transportation. At the hearing before the Committee Dr. Durgin, chairman of the Boston Board of Health, appeared and urged the passage of such a bill, and named, as the diseases to be guarded against, small-pox, scarlet fever, diphtheria, and *typhus* fever.

By the advice of the medical members of the committee, the word typhoid was substituted for that of typhus, and the result was the passage of an act allowing bodies which have died of typhus fever to be carried without any precautionary measures being taken, while the harmless remains of a person dying of typhoid fever are to be regarded as a source of contagion. The members of the Legislature are not to be blamed for following the absurd lead of the medical members in considering typhoid and typhus as synonymous terms, but what a chance Governor Butler has lost of sending another veto which this time he might justly have ascribed to careless legislation.

The Boston Board of Health has issued a regulation requiring that the bodies of all persons dying from small pox, diphtheria, scarlet fever, or *typhus* fever must immediately be prepared for the coffin, wrapped in a sheet saturated in a ten per cent. solution of chloride of zinc, and placed in a coffin, which must be absolutely tight, and which must not be reopened, and other local Boards would do well to follow this example.

SANITARY AND MEDICAL LEGISLATION IN NEW JERSEY.

THE Legislature of New Jersey has been very active lately in sanitary and medical legislation. The Board of Health of the State has apparently piped unto it, and it has danced nimbly if not judiciously. The last issue of the *Sanitary Engineer* contains no less than four acts approved March 22d concerning these subjects. The first prohibits the sale of cigarettes or tobacco in any of its forms to minors; the second supplements a previous act to regulate the practice of medicine and surgery; the third supplements an act relating to local Boards of Health and gives larger powers; the fourth supplements an act to prevent the adulteration of food and drugs.

The act prohibiting the sale of cigarettes or tobacco to minors, though well meant, will undoubtedly prove a dead letter; and, as the *Sanitary Engineer* points out, there is not a little to criticise in most of the other acts referred to. Section 6 of the Supplementary Act relating to local Boards of Health reads thus:—

"6. And be it enacted, That any county, city, or township Board of Health shall have the authority to specify any contagious disease, or diseases in cases of death from which no public funeral shall be had, and to prohibit the same [!] under penalty of fifty dollars, or in case of the threatening or prevalence of an epidemic to make prohibition of the same as to the particular disease or diseases then prevalent, and any township Board of Health shall have the same power whenever the attending physician in writing advises the exercise thereof, or whenever any two physicians of the same county certify that they believe the interests of the public health require such restriction."

From this it is evident that the New Jersey Legislature has been as little successful as that of Massachusetts in the working of its law intended to govern the burial of those dying from contagious diseases.

The Supplementary Act to prevent the Adulteration of Food and Drugs provides that in cases of conviction the penalty shall be paid to the person bringing the suit, and gives analysts or inspectors appointed by the Board power to arrest or detain goods in transit; both of these provisions will be found in practice, we believe, to work injuriously. It is moreover said that the New Jersey Board has announced its intention to occupy itself with frauds affecting health to the exclusion of those of a purely commercial character. The wisdom of such a resolution will be variously regarded.

INTERNATIONAL CONGRESS OF COLONIAL PHYSICIANS.

IT has been decided, on the initiative of the Netherlandish Association for the Advancement of Medical Sciences, to take advantage of the International Colonial Exposition at Amsterdam to hold a Colonial Medical Exposition, and to convene an International Congress of Colonial Physicians on the 6th to the 8th inclusive of September, 1883.

The Congress is to have an exclusively scientific character, and its *membres effectifs* will comprise those physicians, pharmacists, and veterinarians who practice, or have practiced in the colonies or in tropical countries. Other members of the medical corps may take part in the labors of the Congress as *membres ordinaires*.

The Committee of Organization in preparing the work of the Congress has chosen certain subjects, which appear worthy of interest, in regard to the diseases of intertropical countries, and has invited certain gentlemen to act as reporters, who shall express the actual condition of the subjects in certain conclusions which shall serve as a basis for discussion. These conclusions, as also the definite programme, will be published before the opening of the Congress.

The topics chosen for discussion are Quarantines; Special Education of Physicians of the Colonies; Hygiene of the Profession, and Unhealthy Trades in the Colonies; of the Modifications to which Certain Maladies, and in Particular Infectious Diseases, are subject under the Influence of Tropical Climates; of Phthisis in Tropical Countries; of the Treatment of Exotic and Tropical Diseases in Temperate Climates.

These questions are evidently chosen with the desire to find those subjects in which the interest of intertropical and temperate (in a geographic sense) physicians join.

THE WATER SUPPLY OF NEW YORK.

THE New York Legislature has finally passed a bill providing for the construction of a new Croton aqueduct; but, urgent as the need of a new aqueduct is, it is believed by the better part of the community that it is the duty of Governor Cleveland to veto this act on account of the opportunity which it affords for the politicians to fatten on the public spoils for an unknown period of years to come. The action of the authorities at Albany is all the more disgraceful from the fact that the bill was rushed through, in spite of the earnest protest of a committee of sixty gentlemen appointed at a mass meeting of the best citizens, irrespective of party, held at Chickering Hall on Tuesday evening, May 1st. At this meeting resolutions were adopted to the effect that the people of New York demanded that the Legislature should enact a law authorizing a sufficient supply of water for the city in the shortest time and most economical manner practicable; that such a law should provide that the works for such a supply should be put into the hands of a commission, a continuous majority of which should be private citizens specially qualified, and each member possessing equal powers; that the bill introduced by the Mayor and his associates in the late Water Commission was substantially such a bill; and that they therefore urged its passage and earnestly protested against any bill or amendment that would put this great work under partisan control.

In the face of public opinion, however, as expressed in this protest and the repeated warnings of the press, the two houses at Albany united in passing a bill in which three commissioners are named as the almoners, each in behalf of a political faction, of the patronage which will accrue from the building of an aqueduct, "to see that each faction gets its share, and that no hungry spoilsman goes unfed." Mayor Edson has pronounced the act, as passed, unconstitutional, opposed to the principle of home rule, and a violation of the city charter, and it cannot be denied that, as has been said, there has not been a more open and impudent defiance of the rights and needs of the people of New York in behalf of the tax consumers since the passage of the Carpenter Street Cleaning Bill three years ago.

DR. WILLIAM FARR, F. R. S.

THE death of Dr. William Farr is not at all unexpected to students of sanitary science, and to the medical profession, who for two years past have missed his valuable contributions to the English statistical reports. His rapidly failing health has prevented him from completing a half century's work devoted to the public service, and distinguished for ability of the highest order, added to enthusiasm for the special task which he undertook of establishing a science of sanitary statistics. He edited his first registration report of the births, marriages, and deaths in England (including Wales) in 1837, and did not fail for forty-three years to be at his post of the virtual directorship of that wonderful system of vital statistics in which England has really educated the enlightened states of the world.

During his time of service over sixty million names have been indexed for reference, the number of searches of the records for authentication of birth, proof of death, etc., increased from several dozen to nearly thirty thousand annually, and the certificates issued from the office reached a number considerably exceeding twenty thousand each year. He had seen his method and system of classification followed largely in Western Europe and entirely in the United States and Canada. His searching analysis of the death returns and birth records from even the smallest town showed where causes of excessive mortality prevailed, and under what conditions diseases were rife, so as to open the way for the health officer's preventive measures and the legislator's enactments for controlling pestilences. To him and to Edwin Chadwick, men quite different in their gifts, to the scientific statistician, and to the practical sanitarian more than to any other two men of this century, the modern world owes its

increased immunity from diseases which were plagues a quarter of a century ago (cholera and typhus fever), and its diminished death-toll from many of the destructive diseases.

MEDICAL NOTES.

— Professor Nordenskjöld, during his Arctic voyage, was perplexed by the question, What becomes of the bodies of animals which die a natural death? He very seldom found such remains, and declared that on Spitzbergen it was easier to find vertebræ of monster extinct reptiles than the bones of the seal, walrus, or bird of the present day. The problem is yet unsolved.

— A little girl of seven years, after jumping rope two hundred times in succession, complained of headache, and passed into a condition of coma, dying on the second day with symptoms of cerebral congestion.

— Glycerine has been given internally by M. Desguin, of Antwerp, in certain forms of skin disease with, it is said, marked success, especially in acne punctata and the furuncular diathesis. He commences with four drachms daily and gradually increases the dose. He states that the secretion of the cutaneous glands, which is thick and irritating in these diseases, becomes more liquid, and cutaneous irritation is notably lessened. During convalescence from scarlet fever he believes that it facilitates desquamation.

— The meteorological bureau of Ohio proposes to establish a system of weather-signals to be displayed on railway trains, making use, of course, of the predictions furnished by the United States Signal Service. Arrangements have already been made with one road leading out of Columbus, and a system of signaling will be put in operation as soon as the best form of signals can be determined upon.

— The chief publications on natural science issued in Bengal the past year were catechisms of sanitation and hygiene for use in the schools in Bengal, and text-books of algebra, arithmetic, and physical geography. Baboo Kási Charan Gupta published the first volume of a Bengalese translation of an English work upon surgery.

— Mr. Richard A. Proctor, the well-known English astronomer, once tried the experiment of wearing a corset, and thus describes the result: "When the subject of corset wearing was under discussion in the pages of *The English Mechanic*, I was struck," he says, "with the apparent weight of evidence in favor of tight lacing. I was in particular struck by the evidence of some as to its use in reducing corpulence. I was corpulent. I also was disposed, as I am still, to take an interest in scientific experiment. I thought I would give this matter a fair trial. I read all the instructions, carefully followed them, and varied the time of applying pressure with that 'perfectly stiff busk' about which correspondents were so enthusiastic. I was foolish enough to try the thing for a matter of four weeks. Then I laughed at myself as a hopeless idiot, and determined to give up the attempt to reduce by artificial means that superabundance of fat on which only starvation and much exercise, or the air of America, has ever had any real reducing influence. But I was reckoning without my host. As the Chinese lady suffers I am told, when her feet-bindings are taken off, and as the Flathead baby howls when his head-boards are removed, so for a while was it with me. I found myself manifestly better in stays. I laughed at myself no longer. I was too angry with myself to laugh. I would as soon have condemned myself to using crutches all the time as to wearing always a busk. But for my one month of folly I had to endure three months of discomfort. At the end of about that time I was my own man again."

— It is reported that a German investigator has recently made some experiments in the lowering of temperature by means of a mixture of alcohol and snow. In one experiment he made, 75 gr. snow and 77 gr. absolute alcohol at +4° C. gave, on mixture, a temperature of about —30° C., and, in other experiments, with 77° of each, temperatures of —24.2° C. and —29.4° C. were reached.

— The proprietress of the only opium parlor in Philadelphia resides in a small house on Mount Vernon Street. She is a pale, refined-looking woman of about thirty-five years, and her appearance does not indicate a victim to the opium habit. She claims that many of the frequenters of her place on Mount Vernon street move in good society and reside in the fashionable quarters of the city, and she seems to consider herself a public benefactress in offering a quiet retreat to women victims of the opium habit, where they can indulge in safety and comfort, and is quite satisfied she will do very well there.

— A new factory law came into operation throughout the Russian Empire on May 1st, regulating the employment of minors in factories. Children under twelve years of age are not to be employed on any pretense whatever, while from the ages of twelve to fifteen they must not be allowed to work during more than eight hours a day. In the latter case, moreover, they must attend school at least three hours a day.

— Metallo-therapy in hysteria receives from a German writer in *Archiv für Heitere Gynäcologie* an indorsement even more striking than any we have seen by M. Charcot as to the wonderful effects of this agency: Marie O., a chamber-maid in the house of a privy councilor in Berlin, was compelled, among various other laborious duties, to light to the door the numerous guests who visited the house nearly every evening. The reporter had occasionally opportunity (she was charming, and nineteen years old) to notice how she comported herself to the visitors who attempted to call a smile to her lips by liberal "trinkgelder." This, however, was no easy task; on account, probably, of some anomaly of menstruation she was hysterical, apparently; always solemn, almost melancholy in her bearing; sometimes he even thought he saw tears in her eyes. This case of hysteria, thus clearly made out, seemed to him in every way suitable for the study of the influence of metals on the psychical state, and the reporter determined at the next evening reception to which he was invited to institute

some experiment on this point. Accordingly he posted himself behind her as the guests passed out in leaving the house; when nickel, copper, or silver in pieces of small circumference came in contact with her beautiful hand, the melancholic condition remained unaltered, became even, indeed, painfully exaggerated. A larger piece of silver, apparently about as large in size as a five-mark piece, seemed reflexly to call forth some transitory improvement. Suddenly, however, as a handsome young baron passed before her, and, with a meaning look, pressed something into her outstretched hand, he believed that a complete cure had been accomplished; he looked closer, it was a gold ten-mark piece. The above case is reported as showing the comparative value of gold and other metals in the treatment of hysteria; it would seem that, to be equally efficacious, silver must be applied in larger quantities than gold.

NEW YORK.

— The Board of Guardians of the Poor, accompanied by a number of members of the Select and Common Councils, members of the medical staff of Blockley Hospital, and other officials of Philadelphia, recently visited Blackwell's Island. They inspected the Charity Hospital with the greatest care, and were especially interested in the working of the training school for nurses at that institution. It is proposed to establish a similar school in connection with the Philadelphia Hospital (Blockley) under the charge of a thoroughly competent physician, and it is said that the position will probably be offered to Dr. Louis L. Seaman, who has been chief of staff at Charity Hospital since 1881, when he succeeded Dr. Esterbrook in that capacity.

— During the latter part of April the Legislature passed the bill establishing a State park at Niagara Falls, and before its adjournment the Senate confirmed the Commissioners appointed by the Governor for the preservation of the scenery there, who are all gentlemen of position and high character.

— A "kirmess," or Dutch festival, something between a fair and a fancy dress ball, was given at Delmonico's, under distinguished patronage, in aid of the new skin and cancer hospital on the 28th of April, and proved a great financial as well as fashionable success. On the evening of May 4th an amateur comic operetta entitled Robinso Cruso, written by Mr. Almet F. Jenks, and composed by his wife, a daughter of Bishop Littlejohn, of Long Island, which includes a visit to the lonely island of Juan Fernandez of a party of Pilgrim Fathers and Puritan maidens on a Cook's tour around the world, was given with equal success at Chickering Hall for the benefit of the Bellevue Training School for Nurses.

— Dr. Henry B. Wilbur, superintendent of the State Idiot Asylum at Syracuse since its foundation, died suddenly at the asylum April 30th, aged sixty-three years. He was a native of Wilden, Mass., and a graduate of Amherst College, and was the pioneer educator of idiots in this country, having established the first school for this purpose in his own house in 1848. He took charge of our experimental asylum at Albany in 1851, and three years later was appointed to the position at the State institution at Syracuse, which he filled with distinguished ability up to the time of his death.

— Just before its final adjournment for the year the State Senate passed the bill legalizing the United States Medical College, against which the County Society at its last meeting officially protested. By this measure all the graduates, past, present, and future of this notorious institution, which is a disgrace to any civilized community, become "legally qualified practitioners," and as such are entitled to consultation, under the new code, with all the members of the regular profession.

— Some of the medical journals, as well as the daily papers, are raising a great hue and cry over the alleged fact that Dr. Joseph W. Howe has been compelled to resign his position as professor of clinical surgery at Bellevue Hospital Medical College on account of his being a supporter of the new code of ethics; but whether this is actually the case or not, it may perhaps be well to remember that medical colleges, as a rule, are not supposed to be conducted solely for the advantage of one or more of their professors, and it is difficult to see why an institution which has officially announced that it pledges itself unconditionally to support the national code of ethics should not have a perfect right to request the resignation of any members of its faculty who by their teaching or practice act in direct violation of that code.

PHILADELPHIA.

— Another operation of nephrectomy has been performed in Philadelphia, Dr. S. W. Gross being the operator. The patient, a lady, Mrs. Z., fifty-nine years of age, was of spare habit, and had suffered much pain accompanying an abdominal growth, forming a tumor, which had been first noticed only about three months previously. There was at first a doubt whether the tumor was renal or ovarian, but on careful examination Dr. Gross decided it to be malignant disease of the kidney. On April 20th laparotomy by median incision was performed, and the right kidney removed; it was found transformed into a cancerous mass, with very little healthy structure remaining; owing to numerous adhesions a ligature was made to embrace the attachments, and the pedicle cut short. At the same operation the gall-bladder was found to contain several calculi, and cholecystectomy was also performed. On the next day the patient was doing quite well, the pulse was good, and the temperature was not elevated, but the following day she perished with peritonitis. The full report of this case will probably be communicated to the Academy of Surgery at its next meeting.

— In a former note allusion was made to a case in which death occurred after Bigelow's operation for lithotrity, where it was reported that the bladder had been ruptured. It is now stated that the bladder was greatly contracted and thickened, so that it could not be ruptured by any ordinary force; death was caused by peritonitis. The stone was crushed by the operation, and had been partly expelled.

Correspondence.

THE UNFITNESS OF NEWPORT AS A WINTER RESORT FOR CONSUMPTIVES.

DR. STORER'S QUESTIONS ANSWERED.

MR. EDITOR, — In answer to the series of questions propounded by Dr. Storer in your journal of April 26th I will take them up *seriatim*, first subscribing to the compact of conducting the discussion in a friendly spirit: —

(1.) The suitableness of a climate for consumptives is based upon statistics of actual results attained on the one hand, and on the other upon the proofs, furnished by experiment, of the effects of the various climatic constituents upon the human organism in health and in disease. The results of these investigations, as found in medical literature, as observed by colleagues now living and my own experiences thus far, are the basis of my "theory." These results demonstrate that *dryness*, *elevation*, and *equability of temperature* are, in the order named, the climatic conditions favorable to the arrest and ultimate cure of consumption. Mere degrees of temperature — hot, warm, cool, and cold — represent so many degrees of sensation as experienced by individuals. For proof of dryness being the chief requirement, see Influence of Climate in Pulmonary Consumption, by C. Theodore Williams, M. D., of London, as an example. Another truth is that changes of intensity or of time (quality or quantity) or both of the interdependent relations between the quantity of moisture present and the stability of the temperature of the air mass determine the character and intensity of disease in a large measure. In other words, the moisture quantity must be either permanently below fifty per cent. or incapable at least of great percentage at any period. And next in importance to be avoided are sudden or persistent (or both) changes to either extreme great heat or cold. Let me state other facts as tersely as possible. *Excessive moisture* and *cold* are the sources of the inflammatory form of consumption in northern latitudes. *Excessive moisture* and *heat* are the sources of the generally infective (tubercular) form of consumption in southern latitudes. In either the cause of intermittent or remittent exacerbations are sudden or persistent changes in the *humidity of the air* or in changes to extremes of temperature, heat, or cold, or both happening together. Now these are the facts as established by experimental observation and practical results. I must, therefore, call upon Dr. Storer to declare himself in accord with the above, or I shall be compelled to quote so voluminously as to fill more space than any journal will allow me. In articles, the titles of which will be sent Dr. Storer by mail, I have, with the expenditure of much time and labor, set forth the evidence. But for the sake of the cause with which I am identified I am willing to reproduce the proof in detail if necessary. Again I say that a climate in which dryness of soil is the leading feature may show a small percentage of deaths from consumption. But can I not make myself understood when I say that the state of health of the population has nothing whatever to do with the cure or arrest of consumption? Two facts now remain uppermost: (1.) The requirements for a suitable climate for any form of consumption are as above stated, with very slight modifications, not necessary for our purposes. (2.) Dr. Storer has brought only statistics of death from consumption in Newport and elsewhere without producing any statistical actual results attained. For these I call, and cannot accept a statement that patients felt comfortable or even gained in weight. What we want to know is what became of the lung lesion.

(2.) Yes. Dr. Tyndale advises patients in the advanced stages of phthisis to go to Colorado, New Mexico, Cumberland Mountains, and Northeastern Georgia, for two reasons: (1.) Because limited experience has shown that desperate cases do get well there, the opinion of the physician at home to the contrary notwithstanding. (2.) Because at home they will certainly die. If, because of the great prominence of irritation as a factor, they are told to seek equability of temperature, it is enjoined upon them that this is only a stepping-stone to dryness with more or less elevation.

(3.) The "great mass of consumptive invalids in moderate circumstances" have been a source of much thought and trouble to me as well as to others. If it becomes necessary to leave our posts for the winter, a trip to Oakland, Md., to Aiken (dry and tolerably equable), or Georgia costs more than one to Newport, but residing in either of the places named is as cheap and cheaper than at Newport, the patient is as much, if not more, likely to find employment, and last but not least he has the proper requirements of climate, which Newport has not (vide tables in my first letter).

(4.) Dr. Storer is mistaken if he thinks I do not know what "Dr. Storer's belief" is. It is not that Newport is an ideal climate for consumptives, but that it is *better* than Massachusetts and other regions. This disentangles me, does it not, as to my understanding the original recommendation? And now I reiterate and emphasize it once more: It is a direct and indirect injury to the consumptives as well as to the medical profession to indorse a climate the advantages of which are only relative. Direct because it will influence hundreds of consumptives to seek the moist and unequable climate of Newport, and cause our professional brethren, who do not look closely into climatic matters, to send them there. Indirect because it will be the means of postponing the dawn of a new era of climatic treatment based upon the constituents of climate which the Lord has furnished us as remedies directed against existing chronic inflammation and chronic sepsis, and not against individual sensations.

(5.) Is answered above. High altitudes under the equator, as the Andes, are the only localities where, in the nature of things, the triumvirate of dryness, elevation, and equability (without extremes of temperature) can be found. Only such need go as can afford it, and their number is not so small as Dr. Storer seems to imagine. An attempt to ridicule is not argument.

(6.) What Dr. Bowditch's fame rests upon is the proof that subsoil moisture is the chief remote cause of pulmonary consumption, which forms the cornerstone of the climato-therapy of the present.

(7.) A man who has ideas, well founded and grounded, which are at variance with "old traditions," and who persistently defends them against shoulder-shrugging, ridicule, and honorable opposition (such as Dr. Storer's), is used to being called "extremist," "queer fellow," "young and inexperienced," and has learned to give and take in good humor. "Fresh air and out-door life," my dear doctor, are good and comparatively efficient remedies, but not sufficient for the arrest or cure of consumption.

(8.) In regard to Dr. Bowditch there exists a slight misapprehension. I quoted what Dr. Bowditch had written to me in answer to inquiries, and did not mean to imply that advantages *in general health* had not been gained by residence at more or less equable climates; advantages gained by any change whatever. Of course what Dr. Bowditch said about the Shoals will have to stand. But on October 13, 1882, he writes to me: "I send now *generally* to Colorado or some of the high places in the West or Southwest." I would quote still stronger language, but what was written will appear in the *New York Medical Journal*, and I have no right to produce it here. By the way, the "lengthy article" referred to is the one to appear in the above journal.

(9.) Yes, it is fair to include Newport in the "ordinary coast climate of New England." Its "oceanic character" is a myth, as its stubborn moisture and temperature tables show, *which in nowise vary from those of the general character of the whole northern coast.* If called upon, I will show up the identity, so as to place it beyond dispute. There are islands, and even stretches of sea-coast, far more equable than Newport.

(10.) By "absolute immunity" no one pretends to signify that no deaths occur. But the differences between the locality in question and others, as to mortality, must be a far more striking one than is represented by Dr. Storer's Newport numbers. Now I once more acknowledge that the Rhode Island figures are not those to judge Newport by. What I do say in regard to these figures is this: —

(*a.*) The mortality of residents of Newport is one thing and the mortality of *imported consumptives* another. How many full-fledged consumptives have thus far been sent to Newport?

(*b.*) This comparative immunity of residents is due to topographical conditions — soil rocky and precipitous leaving no residue. But because residents do not suffer from the effects of subsoil moisture, what has that to do with the atmospheric requirements for the cure of consumption? It is already so moist that a little subsoil moisture added could not make Newport a worse place for consumptives than it is, having the common hygrometric and thermometric features of the coast line, of which it is a part.

On one point Dr. Storer and I may possibly agree. The languor of fashionable people, often mistaken for consumption by themselves, may be cured at Newport. For, as Crabbe says: —

> "For change of air there 's much to say,
> As nature then has room to work her way;
> And doing nothing often has prevailed
> When ten physicians have prescribed and failed."

With thanks for the many kindnesses shown me by your journal, I remain

Yours truly, J. Hilgard Tyndale.

A NECESSARY CHANGE IN THE CATHETER.

Mr. Editor, — It has often been pointed out how necessary it is to be very careful, in treating diseases of the bladder, that the introduced catheter is perfectly clean. Otherwise the introduction of putrefying substance into the bladder may produce suppurative cystitis, with its various followers, pyelitis, nephritis, uræmia, etc.

In cases where you have elderly, weak men under treatment suffering from prostatic hypertrophy or dilatation of the bladder it is often necessary to introduce the catheter for many months, and then it is that the danger of getting bacteria into the bladder is greatest.

I have had an old man under treatment for hypertrophy of the prostate and dilatation of the bladder. Only under chloroform narcosis was it possible for me to introduce a soft-rubber catheter, and later a metal catheter, highly bent.

By pressing the point of the soft catheter I squeezed out a quantity of decomposed blood. And it is just in this part of the catheter, *below* the eye, in which the infectant secretion is hidden.

Metal catheters may be thoroughly disinfected by boiling them, but of course that is out of the question with the soft catheters; neither can they be disinfected by soaking in carbolized water, for then they swell up too much.

And thus it is by the introduction of infectant secretions from previous catheterizations that so many complications arise. I therefore suggest that catheters should be made so that the *part below the eye be solid.*

Yours truly,

C. Steensen, M. D., N. Y. S. R.

Elmira, N. Y., *April* 9, 1883.

Miscellany.

THE STUDY OF PHYSIOLOGY IN A VETERINARY SCHOOL.

The newly organized department of Veterinary Medicine in Harvard University, and the provisions for physiological research in the new medical school building already described in the Journal, may add interest to the account given by a correspondent of the *Philadelphia Medical Times* of the experimental department of the great Veterinary School in Lyons, France. This institution is under the charge of M. Chauveau, who is also the professor of experimental medicine in the Faculty of Medicine. It must be evident, even to those not specially interested in veterinary practice, that the advantages of such studies are not restricted to that department of science, but are shared by Human Medicine as well. The school occupies a building which was formerly a monastery, At the entrance are stables containing a flock of sheep. a few cattle, horses, and donkeys, and innumerable guinea-pigs, dogs, and rabbits, which are waiting their turn to aid in the increase of medical knowledge. The main building contains several rooms; around these on all sides are high counters, over which gas and water-pipes run, so that instruments requiring their use can be employed at any point. The rooms to the right are mainly devoted to the instruments for graphic experiments. There are several ordinary "Mareys," and three large instruments, of which *two* have double cylinders of about three and a half feet circumference, and *one* is provided with a continuous roll of the blackened paper, so as to obtain tracings during any length of time; all these are supplied with sets of four needles for taking the thoracic and abdominal respiration, the pulse, and the blood-pressure, or any combination of four actions, simultaneously. On a balcony, over one room, is a complete collection of electrical apparatus and smaller instruments. Iron braces and pulleys are attached to the ceiling and walls for the control of the larger animals during experiments. A steam engine,

running night and day, supplies electricity when wanted, furnishes equable heat, pumps the bellows for artificial respiration, and runs the graphic instruments in connection with a clock and electric wire; so that at the side of all tracings is a tracing which marks each second of time. To the left are rooms for the experiments in "cultures" of microbes. A series of three large stoves are kept constantly at 35° C., 40° C., and 43° C., as these are the temperatures most used for breeding and preserving the cultures. A number more of stoves of all sizes can be heated to any degree for sterilizing and attenuating the fluids and their contents. Next come a series of mercury pumps for producing vacuum and analyzing gases, Pettenkofer boxes, apparatus for analyzing air, etc. A number of these instruments are new and peculiar to this laboratory; by previously arranged tests and schedules they greatly simplify many of the older methods. In a building adjacent M. Chauveau has just completed a Pettenkofer box of iron and glass, — with every apparatus for the analysis of the air of entrance and of exit, — in which can be placed a horse, a dozen sheep, or a bed with every convenience for a man, well or sick. Mechanical contrivances allow food and water to be given or withdrawn without opening the box, and tubes and troughs collect the excretions. The large lecture-amphitheatre is connected with the laboratory by wires for electricity, and there the circulation, respiration, and action of the nerves are shown on the horse and donkey, so that a hundred students can see the results clearly, instead of having them monopolized by a pair of assistants, as often happens. The amphitheatre can be darkened, and with an electric light the movement of the needles of the graphic instruments is projected on a screen so as to appear six feet in length, and the spectator sees distinctly the tracings in an outline which does not permit him to overlook the smaller deviations.

ACTIVITY OF THE SENSES IN NEW-BORN INFANTS.

WE quote from the *London Medical Record* (March 15th), the summary of the inaugural dissertation of Genzmer on the above subject. He says that the sense of touch is developed from the earliest period, and reflex actions are readily excited by the slightest stimulation of the nerves of touch, especially of the face; then of the hands, and soles of the feet. The feeling of pain is but slowly developed, and is only clearly exhibited after four or five weeks, before which time infants do not shed tears. True muscular sense is at least doubtful. Excitement of the sense of touch gives rise to unconscious reflex movements; the amount, therefore, rather than the quality of the sensation, is observable. Closure of the nostrils occasions a reflex dyspnœa. Hunger and thirst are manifested in an increased general irritability followed by reflex movements; these cease after the first week. Smell and taste are not distinguishable in infants. Genzmer asserts, in opposition to Kussmaul, that the sense of hearing is perceptible in the first, or at most the second, day of life. Newborn infants are so sensitive to light that they will turn the head to follow a mild light; whilst if a strong glare be suddenly thrown upon the eye squinting is induced, and even convulsive closure of the lids. After a few days, the child will follow the motion of various objects by movements of its head. Between the fourth and fifth weeks the convergence of the pupils, and the power of coördination in vision are perceptible. A distinct perception of color does not exist under four or five months; before then it is quantity rather than quality of light that is recognized. The inhibitory reflex centre is not yet developed in the eye; weak and moderately strong irritation excite move ments which subserve that purpose. Excessively strong impressions only excite passive movements. New-born infants cannot separate the impressions on their organs of sense. The readiness of excitability is shown in the fact that the stronger the stimulation, the shorter the physiological interval.

LEECHES.

THE present annual importation of leeches into England is of the value of about $75,000. A considerable falling off from the early part of the century, indicative no doubt of decided changes in therapeutical usages. We learn from the *Monthly Magazine of Pharmacy* some interesting facts regarding the leech. Young ones are useless for medical purposes, and they do not arrive at maturity till their fifth year. The use of any "bait" in catching them is exceedingly reprehensible, as very unfortunate results have followed the application of leeches which have been caught by the use of putrefying meat.

How to choose a vigorous leech is a question which often needs answering; but, in addition to their general appearance, it should be in everybody's power, out of a number, to select at any moment those most likely to do their work promptly and well. For this purpose several should be taken up at once in the hand (which, if too hot at the time, must be slightly cooled first by holding it under the tap), which is then slowly closed upon them for a few seconds. The best and "most warlike" will roll themselves up into a kind of ball or helix; these may be picked out for immediate use, and other handfuls treated in the same manner until a sufficient number of hardy suckers have been selected. The others may be returned to their tank for the next occasion, when perhaps they may be found, under the same "test," more inclined to be active.

Sudden changes of temperature are detrimental to leeches, which should, as may be inferred from the preceding remarks, be kept in *soft* water of good quality, frequently renewed, provided it is not too pure to afford them nutriment. They are peculiarly *sensitive* to electrical influences; many confined in the usual small receptacles will sicken and die, apparently quite unaccountably, but really often from the effects of that electro-inductive condition existing before a thunderstorm.

If the usual leech vase or barrel, say of glass or china, be put into direct communication with the earth by means of a stout metallic chain dipping in the water, and connected by its other extremity to, say the gas or water pipes of a house, fewer leeches in summer will die than if this precaution is not taken. When kept in the usual rather small vessels, the water should be, if possible, rain water of good quality, renewed every eight or ten days with fresh water of the same temperature as that in the leech vase itself.

Dust must be excluded from the vessel by a covering of fine gauze, and the bottom should be occupied

by a layer of clean, fine gravel or coarse sand, to which have been added a few lumps of well-burnt oak or pine wood charcoal. A little pure crystallized bin-oxide of manganese in the granular condition, and carefully freed from fine powder by sifting, is often of great assistance in keeping the water in a wholesome condition. But perhaps the most efficient factor in this direction, wherever it can be applied, is an arrangement for keeping the water slightly agitated and at the same time well aerated.

Directions are given for reviving the appetite of a leech which has once bitten, as follows: Place the creature when removed from the patient in a brine of ten or twelve per cent. strength, the liquid being frequently changed until the animal retains no more blood; it should then be at once "stripped," by holding the tail firmly with the left hand, while drawing the animal slowly between the thumb and forefinger of the right, from the tail up to the head. After this they may be put in fresh water, the latter being renewed thrice daily for three days, and less frequently afterwards. Used leeches may, according to Dr. Christison, be rendered as vigorous as they were at first, if they are placed in a very weak solution of white sugar, and this is renewed twice a day. So treated, the same authority tells us, "the same leeches drew blood three times at intervals of three days, with scarcely any diminution of activity, and without a death among them."

Most practitioners, however, we think will prefer never to use a leech a second time, and therefore will find of more value this direction for recognizing a "second-hand" specimen. Leeches that have been used may be detected by placing them on a soft white cloth, and applying a little dry powdered salt to the head. If in three quarters of a minute no particle of blood be thrown up, the leech is a fresh one. The salt should be washed off immediately. A good leech draws (or causes to flow) upon an average about half a fluid ounce of blood, a fact useful to remember in calculating the number to be applied.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 28, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Diarrhœal Diseases.
New York	1,206,590	630	240	18.56	21.28	3.52	3.68	2.88
Philadelphia	846,984	378	114	14.04	7.15	7.15	2.39	—
Brooklyn	566,689	263	96	21.72	22.42	10.32	5 70	.38
Chicago	503,304	—	—	—	—	—	—	—
Boston	362,535	193	61	16.32	25.62	4.35	2.72	3.26
St. Louis	350,522	153	62	28.60	11.05	7.80	3.90	1.30
Baltimore	332,190	172	68	22.04	9.28	6.72	5.80	4.90
Cincinnati	255,708	86	29	11.67	13.92	2.32	2.32	2.32
New Orleans	216,140	—	—	—	—	—	—	—
District of Columbia	177,638	86	32	15.08	13.92	2 32	3.48	1.16
Pittsburg (1883)	175,000	69	25	13.05	17.40	2.90	4.35	1.45
Buffalo	155,137	52	25	28.80	15.36	3.84	9.60	1.92
Milwaukee	115,578	52	22	19.20	3.84	3.84	5.76	—
Providence (1883)	116,755	48	6	35.36	2.08	—	—	18.72
New Haven (1883)	73,000	19	7	21.05	5.26	5.26	5.26	—
Charleston	49,999	25	6	4.00	8.00	—	—	4.00
Nashville	43,461	20	8	35.00	10.00	—	5.00	—
Lowell	59,485	25	6	20.00	8.00	—	20.00	5.00
Worcester	58,295	24	6	8.32	41.60	—	—	—
Cambridge	52,740	16	7	26.00	12.50	12.50	—	—
Fall River	49,006	21	7	19.13	8.92	4.76	—	4.76
Lawrence	39,178	7	2	28.56	—	—	14.28	—
Lynn	38,284	10	2	10.00	10.00	—	—	—
Springfield	33,340	13	5	—	15.38	—	—	—
Salem	27,598	7	3	14.28	—	—	14.28	—
New Bedford	26,875	16	1	12.50	18.75	—	—	—
Somerville	24,985	13	3	23.08	15.38	23.08	—	—
Holyoke	21,851	11	5	—	27.27	—	—	—
Chelsea	21,785	8	5	—	—	—	—	—
Taunton	21,213	5	0	—	—	—	—	—
Gloucester	19,329	6	1	16.66	16.66	—	16.66	—
Haverhill	18,475	5	0	20.00	—	20.00	—	—
Newton	16,995	8	3	12.50	—	12.50	—	—
Brockton	13,608	6	1	16.66	16.66	16.66	—	—
Newburyport	13,537	4	0	—	25.00	—	—	—
Fitchburg	12,405	5	0	20.00	20.00	—	—	20.00
Malden	12,017	4	1	—	25.00	—	—	—
Nineteen Massachusetts towns	136,017	50	11	6.00	2.00	—	—	—

Deaths reported 2510 (no reports from Chicago and New Orleans): under five years of age 870: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 457, consumption 397, lung diseases 395, diphtheria and croup 124, scarlet fever 92, diarrhœal diseases 50, typhoid fever 36, whooping-cough 34, measles 31, malarial fevers 29, small-pox 21, cerebro-spinal meningitis 17, erysipelas 16, puerperal fever seven. From *typhoid fever*, Philadelphia eight, Providence seven, St. Louis and Baltimore four each, Boston three, New York and Cincinnati two each, Brooklyn, District of Columbia, Pittsburg, Milwaukee, Lawrence, and New Bedford one each. From *whooping-cough*, New York 11, Brooklyn seven, Pittsburg five, St. Louis three, Philadelphia two, Baltimore, District of Co-

lumbia, Milwaukee, New Haven, Nashville, and New Bedford one each. From *measles*, New York 21, Boston four, Baltimore, Cincinnati, Milwaukee, Nashville, Lynn, and Salem one each. From *malarial fevers*, New York 10, St. Louis six, Brooklyn and District of Columbia four each, Baltimore, Buffalo, New Haven, Nashville, and Fall River one each. From *small-pox*, St. Louis eight, Philadelphia five, Baltimore four, Nashville two, New York and Buffalo one each. From *cerebro-spinal meningitis*, New York and Pittsburg three each, St. Louis two, Philadelphia, Boston, District of Columbia, Buffalo, Milwaukee, Worcester, Fall River, Lawrence, and Woburn one each. From *erysipelas*, New York and Buffalo four each, Cambridge two, Philadelphia, Brooklyn, Boston, Cincinnati, Worcester, and Wakefield one each. From *puerperal fever*, Boston two, New York, Brooklyn, St. Louis, Milwaukee, and Providence one each.

Fifteen cases of small-pox were reported in Baltimore, Buffalo five, Pittsburg one, Holyoke one; diphtheria 39, scarlet fever 33, typhoid fever nine in Boston; scarlet fever 28 and diphtheria four in Milwaukee.

In 38 cities and towns of Massachusetts, with an estimated population of 1,120,693 (estimated population of the State 1,922,530), the total death-rate for the week was 19.57 against 22.78 and 19.83, for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending April 14th, the death-rate was 24.7. Deaths reported 4085: acute diseases of the respiratory organs (London) 532, whooping-cough 108, measles 89, scarlet fever 63, fever 57, diarrhœa 29, diphtheria 27, small-pox (London two, Leeds and Sunderland one each) four. The death-rates ranged from 16.9 in Bristol to 25.9 at Hull; Leicester 18.5; Derby 20.1; Wolverhampton 22.2; Brighton 23; London 23.8; Birkenhead 25.3; Sheffield 26; Leeds 28.1; Liverpool 30.1; Blackburn 33.2. In Edinburgh 21.2; Glasgow 33.7; Dublin 32.8.

For the week ending April 7th, in 171 German cities and towns, with an estimated population of 8,704,088, the death-rate was 27.7. Deaths reported 4642; under five years of age, 1993; consumption 763, lung diseases 689, diphtheria and croup 159, diarrhœal diseases 117, measles and rötheln 78, scarlet fever 70, whooping-cough 58, typhoid fever 42, puerperal fever 18, small-pox (Breslau and Heilbronn one each) two, typhus fever (Braunschweig one) one. The death-rates ranged from 12.2 in Kiel to 62.4 in Wurzburg; Königsberg 29.1; Breslau 36.4; Munich 36.4; Dresden 24.9; Berlin 23.6; Leipzig 25.6; Hamburg 26.1; Cologne 29; Frankfort 24.3; Strasburg 30.1.

For the week ending April 14th, in the Swiss towns there were 45 deaths from consumption, lung diseases 40, diphtheria and croup 10, diarrhœal diseases nine, measles two, whooping-cough two. The death-rates were, at Geneva 14.3, Zurich 28, Basle 17.5, Berne 32.7.

The meteorological record for the week ending April 28th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date. April, 1883.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 22	29.945	44	56	37	51	40	89	60	NW	SW	S	9	6	7	C	O	O	—	—
Mon., 23	29.760	37	39	33	89	82	89	87	NE	NE	NE	8	13	12	O	S	O	—	—
Tues., 24	29.790	37	42	32	100	82	89	90	N	E	SW	10	12	4	S	O	R	—	—
Wed., 25	29.920	39	49	34	79	45	61	62	NW	NW	W	12	15	11	C	F	C	—	—
Thurs., 26	30.153	42	52	32	57	51	73	60	W	SE	SW	8	16	8	C	C	C	—	—
Fri., 27	29.791	52	66	36	68	47	80	65	SW	S	SW	11	9	5	O	F	F	—	—
Sat., 28	29.758	49	62	46	63	63	86	71	W	W	W	10	9	4	C	R	O	—	—
Means, the week.	29.874	43	66	32				71										31.05	.37

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening; B., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM APRIL 24, 1883, TO MAY 8, 1883.

CLEARY, PETER J. A., major and surgeon. So much of paragraph 10, S. O. 273, November 23, 1882, from this office, as directs him (then captain and assistant surgeon) to report in person to the commanding general, Department of Dakota, is revoked, and upon the expiration of his present sick leave of absence to report in person for assignment to duty in the Department of the Missouri. S. O. 95, A. G. O., April 25, 1883.

CRAMPTON, LOUIS W., captain and assistant surgeon. Now awaiting orders, to proceed without delay to Fort Wayne, Mich., and report to the commanding officer for duty at that post. Paragraph 2, S. O. 73, Department of the East, April 30, 1883.

PAULDING, HOLMES O., captain and assistant surgeon. To be relieved from duty at Fort Sidney, Neb., and assigned to duty at Fort Douglas, Utah. Paragraph 1, S. O. 42, Department of the Platte, April 25, 1883.

HOPKINS, WILLIAM E., first lieutenant and assistant surgeon. Now on leave of absence in New York City, to be relieved from duty in the Department of the East and assigned to duty in the Department of Arizona. Paragraph 7, S. O. 95, A. G. O., April 25, 1883.

STRONG, NORTON, first lieutenant and assistant surgeon. Upon expiration of leave of absence to be assigned to duty at Fort Thornburgh, Utah. Paragraph 2, S. O. 42, Department of the Platte, April 25, 1883.

The commanding general, Department of the Platte, to grant a furlough for six months to Hospital Steward WILLIAM HAMBERG, U. S. Army, now at Fort Omaha, Neb. S. O. 98, A. G. O., April 28, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING MAY 5, 1883.

H. L. LAW, passed assistant surgeon, detached from the Navy Yard, League Island, Pa., on 10th inst., and ordered to the Yantic.

H. P. HARVEY, passed assistant surgeon, detached from the Yantic, on reporting of relief, and ordered to Naval Hospital, Chelsea, Mass.

WILLIAM J. SIMON, surgeon, ordered as member of a board at Naval Academy.

W. A. MCCLURG, passed assistant surgeon, detached from the Naval Academy on the 15th inst. and ordered to the Dale.

OLIVER C. DIEHL, assistant surgeon, detached from the Naval Academy and ordered to the Constellation.

THE SURGICAL SECTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY will meet at 19 Boylston Place on Wednesday, May 16th, at 7.45 P. M. Papers: Dislocation of Sternal End of Clavicle and of First and Second Ribs at Sternal Ends, Dr. A. N. Blodgett. A New Demonstration of the Cavities of the Mouth, Nose, and Pharynx, Dr. Thomas Dwight.

H. C. HAVEN, *Secretary*.

Original Articles.

A CASE OF CARIES OF THE RIBS, WITH ABSCESS OF THE CHEST.[1]

BY G. K. SABINE, M. D.

John C., clerk, aged forty-four, married, while on his way from a Western city to the sea-shore, applied to me July 24, 1880, with the following history: His father died at the age of forty-one of membranous croup; his mother was still living and well; has four sisters, all healthy. Of four paternal uncles none lived beyond fifty years, and one or more died of phthisis.

The patient has always been temperate, and enjoyed general good health, with the exception of the usual diseases incident to childhood, until nine months ago (October 4, 1879), when he began to suffer from what his attending physician called malaria. This was characterized by severe pain for ten days in the occipital region, accompanied and followed by great prostration and fever, but no chills. At this time he was confined to the house for seven weeks, and the greater part of the time to his bed. He then returned to his work for three weeks, when he was again laid up for the same length of time with a pericardial effusion. This was accompanied by severe pain in the region of the heart. On May 19, 1880, seven months from the first attack, he was obliged to discontinue work, owing to a return of the pain in the back of the head. This, however, soon subsided, and he began to complain of severe pain beneath the left scapula, which extended through to a corresponding point on the front of the chest. When first seen he still complained of this pain. He was fairly nourished; auscultation and percussion revealed nothing abnormal. Temperature not taken. He was taking large doses of quinine, and one fourth to one half a grain of morphine at night. A continuance of the quinine, but in diminished doses, was advised, a gradual diminution of the morphine until it could be discontinued, a generous diet consisting of meat, milk, and eggs, and the left arm to be carried in a sling, as its weight seemed to increase the pain.

On the evening of September 4th, six weeks later, I was called in great haste, and found that the patient had had a slight convulsion. He had just returned from the sea-shore, where, instead of gaining, he had steadily lost ground, and the pain had increased rather than diminished. His wife drew my attention to the fact that there existed at this time a swelling at the seat of pain on the back. Upon examination a slight prominence, or rather fullness, was found between the posterior border of the scapula and the vertebral column, which was undoubtedly fluctuating. Resonance and respiration over the whole chest were normal. No cough.

I would here state that a thorough examination of the apices above the clavicles was not made.

On September 6th, two days later, the patient having been etherized, the abscess was opened, which was followed by a discharge of one ounce of healthy pus. The opening having been made too high to insure perfect drainage, a second incision was made somewhat lower down. The pus was deeply seated, being pent up beneath the vertebral aponeurosis. The wound was at first poulticed, and afterwards syringed and dressed with tincture of myrrh. For some days the patient was confined to his bed, but was soon able to be up and about, taking quite long walks.

On October 28th, nearly two months after opening the abscess, which was still discharging quite freely, he returned west, where he resumed his clerical duties in a railroad office. He continued to work till December, although upon two or three occasions was obliged to give up for a few days. Towards the end of December he had a severe and protracted attack of diarrhœa, and a little later was much annoyed by a very painful cough, the pain being referred to the front and upper part of the chest on the left side. In April he had a second attack of diarrhœa, more severe than the first. His physician has since written me that "at this time for days he (the physician) expected at every visit to find that the patient had died." He also informed me that "the respiratory sounds over the front of the chest on both sides were remarkably clear and distinct."

I ought also to state that he discovered a communication with the interior of the chest, "as a probe could be readily passed through an opening between the ribs and carried up on the inner face of the chest wall," a condition of things which I did not discover until the autopsy.

His chief discomfort at this time arose from intense pain in the hypogastrium, apparently excited by the act of defecation. Some abnormal growth within the peritoneal cavity was suspected, as was also amyloid disease, as albumen in abundance had made its appearance in the urine.

On May 26th the patient was again brought east, being moved on a stretcher. At this time he was much emaciated, appetite poor, the abscess still discharging freely, bowels constipated; urine contained a large amount of pus, more albumen than the pus would account for, hyaline and some granular casts. The urine was neutral or slightly acid, normal in amount, of low specific gravity, and light color. There were no symptoms pointing to the lungs beyond a very slight occasional hack. Morning temperature normal, evening slightly elevated, occasionally as high as 101° F.

The pain in the hypogastrium still continued to be a prominent symptom, necessitating large doses of morphine, especially whenever the bowels were moved. On the following day, May 27th, Dr. Dwight saw him with me. Thorough examination of the abdomen and front of chest revealed nothing abnormal. Some weeks later the pus, or at least the greater portion of it, disappeared from the urine, evidence of renal disease still remaining. Considering the cough, elevation of temperature, emaciation, moderate tympanites and tenderness which appeared later, it seemed not unlikely that the patient was suffering from general tuberculosis, the peritonæum being especially involved. This at least afforded the most probable explanation for the abdominal pain.

During July and August the patient improved slightly, but during the two following months gradually failed, and died October 28th, one year and three months from the time when first seen.

Autopsy forty-eight hours after death.

Body much emaciated. Opening of original fistula opposite the fifth rib on the left side two inches from

[1] Read before the Boston Society for Medical Observation, January 15, 1883.

centre of vertebral column. Cicatrix of counter-opening one inch and a half lower down in the same vertical line. On opening up the fistula it was found to enter a cavity extending outwards beneath the posterior border of the scapula to the angle of the ribs, upwards to the fourth, downwards to the top of the ninth rib, and inwards to the median line. From this cavity a fistulous opening, situated between the fourth and fifth ribs, extended directly forwards into the cavity of the chest. This opening, which was not more than two lines in diameter, had smooth, sharply defined borders.

On opening the abdomen the diaphragm was found at the top of the fifth rib on the right side, and the bottom of the fourth on the left. The left lobe of the liver apparently enlarged, extending to a point nearly beneath the cartilage of the ninth rib, and upwards to the fifth rib, at a point two inches outside of the junction of the cartilage with the rib. External surface of the intestine normal in appearance. The abdominal cavity contained about eight ounces of clear serum.

On removal of the sternum the pericardium was found to contain somewhat less than one half an ounce of clear serum. Left heart contracted, right dilated. The mitral valve was slightly thickened on the edges, and barely admitted two fingers; tricuspid admitted three readily.

Right pleural sac contained about three fourths of a pint of clear serum, and the left about one fourth of a pint, which was slightly turbid.

Apex of right lung presented a firm, oblong cicatrix, one fourth of an inch deep, indicating old trouble. The anterior border of the middle and upper lobes presented small patches of recent catarrhal pneumonia. The left lung was bound to the chest walls posteriorly by firm adhesions extending from the fifth rib upwards over the apex. The upper two thirds of the lung itself was solid, owing to a recent pneumonic process.

On tearing away adhesions which bound the lung to the chest walls a circumscribed pus cavity was opened extending from the clavicle to the top of the fifth rib. The left half of the anterior surface of the first, second, third, and top of the fourth dorsal vertebræ was found carious, as was also a portion of the first, second, third, fourth, and fifth ribs. The first rib was more or less carious from a point directly under the clavicle to its head, and the remainder from their heads to about opposite the anterior border of the axillary space. The first rib was the seat of much more extensive disease than any of the others, having entirely disappeared at one point, just beneath the clavicle, only the periosteum on the upper surface remaining.

The muscles of the back were entirely separated from the diseased portions of the ribs, and the soft tissues between them destroyed, so that each was entirely surrounded by pus.

The spleen was found to be the seat of commencing amyloid degeneration. Liver healthy. Kidneys more or less fatty, and presenting here and there the characteristic reaction with iodine. Bladder normal. The lower portion of the large intestine was found to be the seat of catarrhal inflammation with slight ulcerations. Intestinal canal otherwise healthy.

To review the case: a man after a prolonged illness, supposed to be malaria, is seized with severe and persistent pain under the shoulder blade, at the seat of which, after some months, an abscess is discovered and opened. The first discharge of pus is followed by improvement, and that in turn by gradual failing for many months and death, owing to the condition of things stated in the record of the autopsy.

The questions that naturally arise are, first, was the original trouble malaria? It was stated that there were no chills; the patient simply had a prolonged illness accompanied by severe pain in the head, fever, and prostration. He lived in a malarious region, and such troubles are not unfrequently followed by abscesses, necroses, etc. On the other hand commencing abscesses are not unfrequently accompanied by severe constitutional symptoms, so that with the evidence it hardly seems fair to say that it was of malarial origin. Secondly, where did the trouble begin? The first rib was entirely gone at one point, while all the others were but slightly affected, being scarcely more than denuded of their periosteum, hence it is natural to suppose that the disease was of longest standing at the site of the upper rib. The question why the pus found its way down back of the lung instead of in front is rather more difficult of solution. During various periods of his illness the patient was confined to his bed, and it seems possible that the horizontal position combined with the contraction of the apex of the lung, which took place at some period, may have had the effect of giving the pus this direction. Thirdly, ought not the wound to have been treated antiseptically? Had it been suspected that the abscess communicated with the interior of the chest it would have been done, yet subsequent developments show pretty conclusively that sooner or later it would have been abandoned. Fourthly, ought not a more accurate diagnosis to have been made at the beginning? Looking back upon the case now it certainly seems so. Towards the latter part of the patient's illness his extremely weak condition did not admit of any physical examination; earlier, the catarrhal pneumonia did not exist. If when first seen the very apex of the lung, that is, that portion above the clavicle, had been carefully examined it would seem that trouble might have been discovered that would have materially affected the prognosis.

CASE OF SLOUGHING OF THE MUCOUS MEMBRANE OF THE BLADDER FROM CYSTITIS FOLLOWING CONFINEMENT.

BY W. J. OTIS, M. D.

THE patient, Mary A., single, aged twenty-six, primipara, from whom this specimen was obtained, was confined in the Boston Lying-in Hospital on December 27, 1880. There was nothing to remark about her labor excepting a somewhat delayed second stage, owing to the smallness and tightness of the vagina. The perinæum was torn, requiring sutures. Examination of the urine passed during labor showed the presence of albumen, hyaline and granular casts. On the second day after delivery the albumen and casts had entirely disappeared. On the evening of the third day the following symptoms appeared: high temperature, quick pulse, offensive lochia, and a mild delirium. These symptoms however disappeared after intra-uterine douches of warm water and carbolic acid 1–80.

During the first week after confinement she was catheterized as often as necessary; at first on account of her perinæum, later from retention. During this time symptoms of cystitis developed, though not marked

enough to call for any treatment; nevertheless they persisted up to the day of her discharge from the hospital, January 10th, the fifteenth day after delivery. On January 28th, eighteen days after leaving the hospital, I was called twice to see her on account of retention. She was suffering intense pain in the region of the bladder, which, at the first visit, was only partially relieved by passing the catheter. At the second visit, on attempting to pass the catheter I could not insert it into the meatus. On looking to see what prevented the entrance of the catheter, saw a sloughy, shreddy mass protruding, which by using considerable force was extracted with my fingers, tearing it in the process. Immediately there came a gush of very fetid, ammoniacal urine into the bed, giving instant relief to the pain.

On questioning the patient as to her symptoms since leaving the hospital, she informed me that she had been daily getting worse; that she was in distress all the time, making water every ten or fifteen minutes; that the amount passed at each time was small, and that the urine itself was bloody, very thick with slime, smelling very offensive, and strong of ammonia.

Examining the specimen I found that it consisted of two very irregular shaped pieces of membrane, one five inches long by one and a half inches wide, the other three and a half inches long by two and a half inches wide. The membrane was somewhat elastic, not very tough, and had rather a saccular form. The exterior was of a whitish color, smooth, but not homogeneous, as there could be distinctly seen what looked like fibrous bands running in various directions. The interior was of a darker color, and everywhere covered with a gritty deposit, which could be easily scraped off. No orifices of ureters or urethra could be made out. Owing to the torn condition of the specimen, it was impossible to ascertain whether it was a complete cast of the bladder or not.

Dr. W. F. Whitney has been kind enough to examine the specimen, and the result of his examination is as follows: —

BOSTON, *February* 12, 1881.

MY DEAR DOCTOR, — The specimen which you left with me for examination consisted of two pieces of thin tissue, one measuring about eight by three cm. and the other twelve by three, with a very irregular, jagged edge. One surface of the specimens was shaggy and covered with a yellowish-gray gritty deposit; the reverse surface was almost entirely free from the gritty deposit above mentioned, except along the edges, where it was covered for a short distance. This surface was in general smooth, but not homogeneous, for there were seen bands of rather darker colored tissue crossing it in various directions, giving to the whole a slightly trabeculated look. Upon closer examination some of the trabeculæ were found to be small blood-vessels.

The microscopic examination showed that the gritty deposit was composed of transparent prismatic crystals with truncated ends, having the characteristic shape of triple phosphate, and of opaque rounded masses dissolving with effervescence upon the addition of nitric acid (carbonates).

The structure of the tissue itself immediately beneath the crystals was quite homogeneous, presenting nearly a slightly opaque granular appearance with here and there small round bodies (nuclei?) scattered through it. At one point these round bodies were quite closely and regularly arranged, as if there had previously been cells there, the bodies of which had been destroyed, leaving the nuclei *in situ* (epithelium cells).

Portions removed from the reverse surface showed the presence of small fibres of elastic connective tissue and in some of the trabeculæ the tissue was arranged as if composed of muscular fibres, but the separate cells could not be made out.

From this it seems that the specimens are real tissue and not the results of an exudation, and, moreover, that it is connective tissue, such as might be found in the mucous and submucous tissue of the bladder.

Yours truly, W. F. WHITNEY.

As for the history of this case since the slough was removed, the recovery was slow, the slough coming away in January, and in the July following she was well. During the first week of treatment, on two occasions, small pieces of slough similar to the specimen shown came away during micturition. There were at no time any symptoms of a general character, the patient often commenting on the fact that she felt so well. The urine, which at first was offensive, alkaline, and of a dark red color from the large amount of blood present and having a large amount of dirty brown sediment, in three weeks became nearly normal. Frequency of micturition, accompanied with pain during and after the act, and incontinence, were the most annoying symptoms. The micturition was more frequent at night than during the day, at intervals of every half hour at first, later on hourly, and finally every two or three hours. The incontinence persisted up to the last, showing itself particularly on any such occasion as laughing, coughing, or sneezing. Another feature in the after history of this case was an occasional hæmorrhage from the bladder, occurring even after the patient considered herself well, especially after any severe exertion.

Treatment. — For the first two months rest in bed; milk diet, demulcent drinks, as flaxseed tea; triticum repens was tried for a short time. Citrate of potash and infusion of buchu she took the greater part of the time with benefit.

In addition, the bladder was washed out twice daily with a warm solution of borax ʒi. to ʒi.: this, however, had to be discontinued after two weeks' trial, as the bladder would not tolerate the presence of the catheter or the water. Thinking that the incontinence might be due to a relaxation or want of tone in the sphincter vesicæ, atropia in one fortieth grain doses was tried for some time without any marked effect.

In April as the patient did not appear to make any improvement Dr. C. B. Porter saw the case with me in consultation. He advised etherizing the patient, dilating the urethra, and exploring the bladder with the finger. This was done, the urethra readily admitted the forefinger, and that portion of the urethra at the neck of the bladder was found to be dilated, standing open with thick indurated walls. The bladder was found to be sufficiently capacious, and its surface being explored found to be perfectly smooth and free from any deposit, thus showing that the patient's symptoms were not due to the presence of any foreign substance in the bladder, but rather to a relaxation, and want of tone in the sphincter and the urethra. The patient's inability to retain urine did not appear to be increased by this operation. After allowing sufficient time for the patient to recover from the operation, at the suggestion of Dr. J. W. Elliot, electricity was applied with a Gaiffe battery to the entire length of the

urethra. The application was made at first twice each week for three weeks, then three times a week for two weeks, and finally daily for one week, each application lasting from five to ten minutes. The patient's condition improved after the first few applications, and at the conclusion of these applications, which was in July, 1881, she declared herself quite well. I have seen her several times since that date, and she informs me that her recovery was complete. She states, however, that the capacity of her bladder is somewhat less than it was before her confinement.

TWO CASES FROM PRACTICE.[1]

BY F. C. SHATTUCK, M. D.

A CASE OF OBSCURE NERVOUS FATAL DISEASE.

MAY 6, 1881, I was called to see a single lady of fifty-five from another part of the country, and obtained from her sister much of the following history: Her father died of gall-stones, her mother and several sisters are alive, the mother and one sister belonging to the class of nervous invalids. She herself had always been well and strong, but, especially of late years, had been very irregular and careless as regards food and sleep, often rising very early, going out to church, and breakfasting late and lightly. She had several great disappointments in life, and also persistent and real worries. The previous summer she nursed a member of her family during a prolonged and severe illness without sparing herself in any way. In September she noticed, and her attention was also called to the fact by others about her, that her utterance was defective and difficult, besides which there was impairment in the power of swallowing, particularly of solid food. This she thought was due simply to fatigue, and she had acquired, moreover, a horror of "nervousness." She took some rest, however, and improvement was not slow to follow. In a month, considering herself as well again, she resumed her former manner of life, and the troubles soon reappeared, to grow slowly and steadily worse up to the time I first saw her. She had suffered also much from nausea, and was all the winter under the care of a homœopathic practitioner, who is reported to have considered her symptoms as due entirely to malaria, and treated her with strong purgatives. She thought she had derived much benefit from this treatment, the nausea having disappeared, though the difficult deglutition and utterance had increased, and her arms had become weak, especially the left. This weakness seemed to be seated mostly in the shoulder, and it was impossible for her to raise the arms sufficiently to dress her own hair. In former times she had done a great deal of embroidery in a frame, an exercise which is especially fatiguing to the left arm. The muscles at the back of the neck were also weak, and her head sometimes bobbed forward in a very uncomfortable way. In March there was a time when the upper lids drooped, and she was sometimes forced to raise them with her hands to see properly. Of late she had been living entirely on liquids, as solids were very difficult to masticate as well as to swallow, the food getting between her cheeks and teeth. Speaking and swallowing were much more imperfect when she was tired for any cause, but she said that she was not always conscious whether she spoke well or ill. Her sister reported that some months ago she could talk distinctly up to twelve or one o'clock in the day, later only till eleven, and thus the difficulty had increased, so that when I saw her utterance was distinct for only half an hour or so after waking in the morning, but during that time as good as it ever was. Toward the latter part of the day her wants must often be communicated in writing. So, also, as regards deglutition, toward evening when she was tired, her food was often regurgitated through the nose. There never had been any failure to retain the saliva.

Her own opinion was that she was hysterical, and she laughingly said that this was a visitation upon her, as she had always declared that the hysterical condition was one into which she would never fall. I never saw anything about her to which this term would apply. She suffered no pain, slept well, the bowels were regular, and the tongue clean. The catamenia were always regular until September, since when they have been somewhat scanty and irregular; the last appearance was three months ago.

The pulse, skin, and respirations were all normal; the arteries showed no trace of degenerative change, and nothing abnormal could be detected about any of the thoracic or abdominal organs. Sensibility was everywhere perfect, the sight and hearing were normal, and the mind unimpaired. There was some pallor, and a certain flabbiness of the tissues rather than any emaciation. The only abnormal signs, other than those already spoken of, were partial paralysis of the soft palate with some effacement of the left naso-labial fold.

My diagnosis was functional paralysis due to exhaustion. Rest was ordered with food every two hours, and dialysed iron m. xv. three times a day.

May 11th. The nurse reported that she took her nourishment in good quantities, though slowly. Owing probably to the fatigue of the long journey which she had taken to reach Boston her sleep had not been nearly as good, and she had been troubled by bad dreams. She seemed, nevertheless, to be improving. I advised that she should go and sit in the Public Garden.

May 13th. Yesterday she saw three visitors, and went to walk in the afternoon, the wind being east, with a fog. She took some cold, and for the next week kept the house, the weather being very bad. The induced current from a Gaiffe battery was ordered applied to her neck, and passed through the arms for fifteen minutes night and morning.

May 20th. Is gaining in flesh and looks. Catamenia appeared to-day, the first time for three months. Metcalf's elixir of the phosphates of iron, quinine, and strychnia was substituted for the dialysed iron.

June 6th. She improved steadily up to this time, being able to talk distinctly for longer periods, to swallow better, to hold up her head more firmly, and the arms had gained in strength so much that she could dress her own hair. At this time, however, bad news came from home, which worried her, and threw her back somewhat in all respects.

June 18th. Dr. Webber saw her with me in consultation, concurred in the diagnosis, and recommended a continuance in the treatment. He thought that many months would be required before complete recovery could be looked for. Early in July a quiet cottage at the sea-shore was secured for her with her nurse, and after this improvement was more rapid. The cata-

[1] Read before the Boston Society for Medical Observation, February 5, 1883.

menia recurred pretty regularly. It was always noticed that she was put back temporarily by any untoward news from home. The last of July for a few days she had right ptosis and double vision, but these symptoms then passed away. In October she returned to town much better in every respect, and she continued to improve up to about December 1st. She could use her arms perfectly well, had regained complete control over the muscles at the back of the neck, could eat solid food with ease, and only a person who knew her very well would detect any modification in her utterance. But now, December 1st, I began to notice that she did not hold her improvement; the previous symptoms gradually reappeared, and double vision became very troublesome, so much so that a day was appointed for consulting Dr. Hay. It so happened that on that day vision was perfect, and Dr. Hay could detect nothing abnormal about the visual apparatus. Her gait was at times unsteady, but I attributed this to the double vision. There was also occasionally some strabismus. In January deglutition and utterance had become so difficult, and her general condition had changed so much for the worse, that I advised a return to her family. Accordingly, the last of January, a sister came for her. The journey fatigued her somewhat, though not more than one would naturally expect. No immediate alarm was felt by her friends, but two days after her arrival home she died while sleeping quietly during the day-time. There was no autopsy.

The physician who attended her wrote me that no new symptoms appeared, but that her condition was such as led him to make an unfavorable prognosis.

To recapitulate: A single lady of fifty-five has had an exceptional number of trials and disappointments in her life, the nature of which obliged her to keep them almost entirely to herself; for many years has been negligent as regards food and sleep, and at last breaks down, the prominent symptoms being partial paralysis of motion in the tongue, palate, portions of the face, the muscles of the back of the neck and left shoulder. This paralysis is localized chiefly on the left but is not strictly limited to that side, is always distinctly aggravated by fatigue or mental worry, and is said not to be appreciable when she wakes in the morning. At the end of six months' rest these symptoms have disappeared almost entirely, but then return more rapidly than they went, and two months later, about seventeen months after the first appearance of paralysis, death ensues during sleep.

In default of an autopsy it does not seem to me possible to arrive at any positive conclusion as to the exact nature of the case, which is on that account, perhaps, all the better adapted to discussion.

In the hope of calling forth and facilitating criticism I venture to formulate the following questions: —

I. Was the original diagnosis of functional and recoverable disorder, made by me and confirmed by Dr. Webber, correct?

II. If it was correct how are we to explain the fatal result without the advent of any new symptoms, but simply under an aggravated return of the old?

III. If it was not correct, what was the nature of the disease? Can it have been an anomalous case of glosso-labio-laryngeal, or bulbar, paralysis?

Before closing I will merely quote an observation of Dr. Wilks',[1] who says: "It is a remarkable circumstance that there is no disease of the nervous system, as far as I am aware, which may prove fatal, and even show a well-marked lesion or degenerative change after death, but may have its counterpart in a functional and curable disorder." It is obvious that this quotation is brought in as applying to the diagnosis of the case under consideration, not as explanatory of its fatal termination.

[1] Diseases of the Nervous System, 1878, page 256.

RAPID CONVERSION OF A SEROUS INTO A PURULENT PLEURITIC EFFUSION. EVACUATION THROUGH THE LUNG. PNEUMO-PYO-THORAX. RECOVERY.

February 22, 1876, I first saw B. L., a young man of twenty-one, who had been sick about five weeks under the care of another physician. The physical signs were those of a moderate left pleuritic effusion, and the diagnosis was confirmed by the withdrawal of some clear serum by means of a subcutaneous syringe, which I had with me. His general condition was very good, and I saw no reason for interference. He did well until March 3d, when I found him very feverish and restless, and complaining of severe pain in the left front, over the false ribs, and extending through to the back. A friction sound was audible about the lower angle of the scapula, and a systolic murmur at the apex of the heart. There was no obvious cause of the unfavorable change save, perhaps, the fact that he had eaten a piece of squash pie the day before.

March 5th I found him in high fever, and greatly exhausted, and learned that at six P. M. the day before, after a severe fit of coughing, he had brought up a considerable quantity of purulent matter, after which the severe pain in the side abated. The discharge of pus had continued from time to time during the night, with harassing cough, which had prevented sleep. I found tympanitic resonance over the left chest, front and back, with slight metallic clang below the fourth rib in front. The respiration was feeble all over the affected side, and marked by coarse and fine moist râles. Over the right back the respiration was puerile. Ten grains of quinine thrice daily were ordered, and morphia at night.

March 9th. The condition of the patient was rather better. The tympanitic resonance was less marked, and there was some dullness over the left base, where the râles were finer and the voice sounds concentrated. Just below the angle of the left scapula, over an area about equal to that of a silver dollar, there was well-marked amphoric respiration.

March 19th. Improving. Complains for the first time of the physiological effects of the quinine, which was diminished to eighteen grains daily.

March 22d. Expectoration of about six ounces of bad-smelling pus after a hard coughing spell. Omit quinine.

April 20th. Has walked out nearly half a mile. When he is lying down cough is troublesome, and attended with scanty purulent expectoration, but when sitting up he coughs scarcely at all. The left side measures an inch less than the right. Over the upper part of the left chest resonance and respiration are fair; over the lower part percussion is dull, and the respiration is obscured by crepitus. On a level with and an inch outside of the lower angle of the scapula amphoric respiration could be indistinctly heard. The sounds of the heart were normal.

April 24th. Spat up yesterday about one half ounce of blood "looking like pieces of his liver," and reported that he had gained four and a half pounds in the last six days.

April 25th. He went to stay with some friends in the country, near Lawrence.

May 3d. He wrote me that he had gained four pounds more in weight, and could walk three miles without fatigue. During this month, after sawing wood, he spat up half a pint, as he thought, of fluid blood. Improvement, however, was steady, and the middle of July he resumed his former occupation, that of a confectioner, in Boston. He told me that his work obliged him to be in a room at a temperature of about 110° F.

July 31st. Careful measurement showed that the left chest was still an inch smaller than the right. He reported that he coughed occasionally, and, at long intervals, raised considerable tough, white sputa, which sank in water.

December 10th I saw him for the last time. He had been steadily at work since the last report, and felt as well as he ever did. The only physical signs at this time were slight dullness and feeble respiration over the left lower back. The left chest now measured five eighths of an inch less than the right, a gain of three eighths of an inch in about six months.

The sudden conversion of a serous into a purulent effusion and the marked disturbance by which the change was accompanied in this case are interesting. Absorption was going on satisfactorily, and on March 2d everything promised a speedy recovery, but on March 3d it was evident that some complication had arisen, the nature of which was explained on the 4th by the free expectoration of pus. Had the puncture with the needle of the hypodermic syringe on February 22d anything to do with the suppuration? I do not think it probable that it had, but the question is worth consideration. We see occasionally purulent effusions, which, as far as symptoms are concerned, are nearly latent, and it may be that the transformation into pus began soon after the puncture, the rise in temperature and other more serious symptoms of March 3d being due to a circumscribed inflammation of the lung itself or a local superficial necrosis of the pulmonary pleura, through which, on the next day, a severe fit of coughing opened a passage for the pus into a bronchus. The clinical history shows conclusively that free immediate communication with a bronchial tube was established, and that the pus was not simply pressed through the pulmonary tissue laid bare by the destruction of a small portion of the pleura covering the lung; in the latter event pneumo-thorax is a very rare occurrence according to Traube, and the discharge of pus would probably be more constant, but in smaller quantities at a time.

Another question suggested by the case is this: is not discharge through the lung much more liable to occur with moderate than with very large purulent effusion? If the amount of pus is great the lung is so compressed that little or no extra strain is exerted on its tissue by violent cough, and a spontaneous opening is more likely to occur through the diaphragm or chest wall. But if, on the other hand, a considerable portion of the lung is still pervious to air the mechanical effect of forced expiration with a closed glottis, that is cough, is still operative.

The marked tolerance by the patient of quinine seems to me also noteworthy; it was not till the tenth day that he experienced the physiological effects of the drug given in ten grain doses thrice daily.

Finally the termination of the case is to be regarded as exceptionally favorable. The patient was a vigorous young man, and the disease up to the time that it took a bad turn had been so mild as not seriously to impair his strength. Fraentzel,[1] in speaking of the course of empyema, says: "Another process by which purulent effusion may result in recovery has already been mentioned, namely, when by necrosis of a small portion of the pulmonary pleura the pus infiltrates the lung tissue, and so reaching the bronchi is gradually discharged, but it is only rarely that recovery takes place in this way, and then after a tedious illness; much more commonly the lung tissue becomes seriously diseased at the same time. If, however, the purulent contents of the pleura break directly into a bronchus or externally through the pleura costalis a fatal termination may generally be looked for, often after years of failing health. If the contents do not escape outwardly the patient usually sinks in consequence of exhausting purulent fever."

A CASE OF OBSCURE AND RAPIDLY FATAL DISEASE ATTENDED BY EXTENSIVE PAINFUL TUMEFACTIONS OF THE SKIN.[2]

BY DR. J. S. GREENE.

THE patient was an Irishman, married, twenty-seven years of age, stone-cutter, spare habit, sallow complexion. He had had no previous ailments; supposed himself in his usual good health, and worked regularly until the day when his illness began.

Saturday, the 23d of December, after working, he walked a distance of two or three miles to the house of his wife's parents, worthy, respectable people, where he was to pass Christmas. In the evening, after supper, he began to feel pain in the right side, below the axilla. This became severe as well as continuous, and the night was one of suffering. In the morning he discovered a swelling at the seat of pain. During Sunday and until Monday morning he had the services of a homœopathic physician, but got no relief, and grew steadily worse.

I first saw him in the afternoon of Monday, Christmas day. He was in bed, and his symptoms resembled those of acute pyæmia. There was quick, frequent, weak pulse, hurried respiration, and the appearance of suffering, anxiety, and prostration; temperature 101° F., and a fraction; eyes jaundiced; skin of a yellowish cast, neither perspiring nor very dry; bowels and bladder had been freely emptied; no cough; no trouble of heart nor lungs; he could not turn in bed for pain and lameness of right side; below the axilla, just anterior to the lower point of the scapula, was a swelling as large as a tea plate, neither hard nor doughy, but rather fluctuating, quite sensitive to touch, tint a trifle deeper than that of surrounding skin; edges not very well defined.

Poultices and opiates afforded some relief during that night, but the symptoms remained the same. In the afternoon of Tuesday Dr. Fifield came at my request in consultation. He inserted an exploring needle

[1] Ziemssen's Cyclopædia, vol. iv., p. 715.

[2] Read before the Boston Society for Medical Observation, February 5, 1883.

into the swelling, getting only a drop of yellowish serum.

Next morning, Wednesday, the swelling on the right side had mostly subsided, and two others had appeared elsewhere, one occupying the upper half of the outer aspect of the left leg, the other the outer portion of the left buttock, in the region of the trochanter. These swellings were firmer and harder than the first, quite as sensitive, their boundaries better defined. The patient's suffering was extreme, mitigated by one fourth grain doses of morphia hypodermically. The pain was not wholly nor chiefly referred to the swellings, but it was all over, in every bone, as he expressed it, but especially in the legs, just below the calves. At noon, Wednesday, I found on the outer aspect of the right leg, midway between knee and ankle, a well-defined and elevated patch, rather larger than a silver dollar, of deeper color than the surrounding skin. It resembled the ordinary wheal of urticaria except in color and size. A few hours later, when Dr. Fifield saw the patient for the second time, this wheal had disappeared. During Wednesday night pain persisted with severity, restlessness became extreme, and prostration increased, and the patient died early Thursday morning, scarcely more than one hundred hours after the beginning of the attack.

A specimen of the urine taken on Wednesday was carefully examined by Dr. M. V. Pierce. It contained one and one half per cent. of albumen, and large numbers of fine granular casts, with epithelial cells from the tubules, and other appearances indicating an early stage of chronic parenchymatous nephritis.

What did the patient die of? Manifestly not of the painful swellings of the skin. Probably not of the renal disease. Rather, it would seem, of some unknown, profound affection of the nature of blood-poisoning, whereof the tumefactions were reflex phenomena, and upon which the kidney trouble was, perhaps, dependent.

I cannot learn that any record of a similar case exists in medical literature.

Dr. James C. White, to whom I have appealed, has shown me articles published by Quinke, in Berlin, Perroud, in Paris, and Milton, in London, and we remember the paper of Dr. T. B. Curtis, read here in Boston two or three years ago, but these all treated of unusual forms of urticaria without constitutional symptoms, and without fatal results.

An impacted gall-stone may produce urticaria. Could an impacted gall-stone cause the train of symptoms and the manner of death here narrated?

The widow positively refused to permit an autopsy.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY WILLIAM F. WHITNEY, M. D.

RELATIONS OF BACTERIA TO DISEASE.

Tuberculosis. — During the past year great attention has been paid to the bacilli, which were first demonstrated by Koch[1] as occurring in the sputa and tissues of consumptives, and which, from the results obtained from his culture and inoculations, he considered as the cause of tuberculosis. His statement in regard to the presence of the parasite have been corroborated by observers in all parts of the world. The demonstration has been greatly facilitated by the use of Ehrlich's method of double staining with fuchsine and methyl blue. The sputa or fluid is dried upon a cover glass by a gentle heat. This is then placed in a few drops of a solution of one part of fuchsine to fifty parts of aniline water (made by shaking aniline oil with distilled water and then filtering). There it is allowed to remain for twenty-four hours. Then the cover glass is washed with distilled water, and the color that remains in the specimen is discharged by placing it in a solution of nitric acid (one part of strong acid and two parts of water) for from three to five minutes. The acid is washed off with distilled water, and then the cover is placed in a strong aqueous solution of methylene blue, washed again with distilled water, dried over a gentle heat, and finally mounted by placing on a drop of Canada balsam thinned with chloroform. The bacilli appear as minute garnet red rods, while the nuclei and other bacteria are stained blue.

As was to be hoped, the theory has not been received without opposition, and different observers have endeavored to overthrow it. Dr. Schmidt, of New Orleans, did not consider these rods to be bacteria but simply minute crystals of aniline or colored fat. He seems to have entirely ignored the fact that they reproduce themselves and the disease after cultivation, which as far as is known it is impossible for unorganized matter to do.

The latest opponent of Koch is Spina, who acknowledges that these rods are bacteria, but considers them as merely accidental or secondary to the disease. His strongest argument rests on the fact that he has been unable to discover them in tubercles occurring in parts of the body not in direct communication with the air, as, for example, the peritoneum and omentum. Knowing well from personal experience the difficulty of detecting the bacilli in tissues, this objection must be accepted with reservation, until it appears that all other observers are unable to find them. He seems also to have disregarded the positive results obtained from the pure culture experiments, and until these are overthrown Koch's position must be considered as good, although the bacilli are absent in places. This, if true, may be capable of explanation later, when the action and life history of these parasites is more fully known than at present.

In addition to the sputa and viscera the bacilli have been detected in the urine by two independent observers.[2] This promises to be of value from a diagnostic point of view in doubtful cases.

Leprosy. — Hansen [3] who demonstrates the existence of a bacillus in the tubercles of leprosy, has further studied the subject, with special reference to its inoculability upon the lower animals as claimed by Nicosner and Köbner.[4] His inoculation of a monkey had not been followed by any result after a period of six months; but as the time of incubation in the human species is very long, at least a year, the animal is still kept under observation.

At the same time he made further experiments with cultivation in order to determine if possible the life history.

[1] For a translation of his article see Boston Medical and Surgical Journal, vol. cvi., p. 487.

[2] Rosenstein. Centralblatt. f. d. Med. Wissenschaft, Feb. 3, 1883. Rabes (in) Centralblatt. f. d. Med. Wissenschaft, Mar. 3. 1883.

[3] Virchow's Archiv, vol. xc., p. 542.

[4] Virchow's Archiv, vol. lxxxiv., idem., vol. lxxxviii.

The parasites can always be easily found where the products of the disease are present in the tuberculous form. The presence of the bacilli in blood has been recorded by Köbner, whose observation he accepts, although Hansen has never seen them there himself.

In the anæsthetic form of the disease they have not been found. Should other investigators fail to find them it would point to the fact that these forms, which differ so widely from each other from a clinical standpoint, must also have a different pathogenesis.

His first successful experiments at cultivation were made upon blood-serum gelatine. After remaining quiescent for three or four days the bacilli began to develop. Under the microscope a great increase in the numbers was noticed, and at the same time a thickening was seen at both ends, and sometimes two or three nodular enlargements were observed in the course of a fibre. The bacilli also united themselves and formed threads, which either moved about singly or else were thickly matted together. These nodular enlargements were undoubtedly spores, and bacilli with similar appearances have been noticed in man.

He considers, moreover, that the large brown masses which have always been found in the tubercles of this disease are formed of spores or spore-holding bacilli. It is further worthy of note that these brown elements are found later in the tubercles of the skin than in those from the liver, spleen, testicle, lymph glands or nerves.

Glanders. — The discovery of the parasitic origin of glanders followed closely upon that of the bacillus of tuberculosis. This was also made in Koch's laboratory by Professor Schutz and Dr. Loeffler.[1] They succeeded in finding fine rods, like the bacillus tuberculosis, in the tubercles in horses which had died from glanders. These they considered to be the cause of the disease, from the results of their culture experiments. A small portion from one of the tubercles, taken under proper precautions, was placed upon sterilized serum of horses' or sheeps' blood. After a few days luxuriant colonies of the same kind of bacilli developed. After these had been rendered pure by repeated fractional cultivation they were inoculated in various animals, rabbits, guinea-pigs, mice, etc. The animals showed different degrees of susceptibility. But, as a rule, there occurred numerous ulcers about the point of inoculation. These had an indurated base, from which large, dilated lymph canals led to hard and swollen lymph glands. After a large dose there occurred metastatic inflammation of the testicles, ovaries, vulva, lungs, and other organs. Some of the animals died within a few days with symptoms of acute general infection. In all of these bacilli could be found similar to those in the original tubercle, only finer, and which could be propagated by cultivation. In horses the inoculation succeeded even in a more marked manner. In two animals infected in this way, the characteristic symptoms of the disease appeared after a few days. The older of the two animals died after fourteen days, while the younger was killed a day later in extreme collapse. The autopsy showed the same conditions in both animals. At the points of inoculation ulcers, the size of a twenty-five cent piece, had been formed.

The lymph canals and glands corresponding to this part of the body were swollen, and in the lungs occurred ulcerations varying from the size of a millet seed to that of a pea, surrounded by a red zone. The nasal mucous membrane, which had not been infected at the time of the inoculation, showed numerous tubercles and more or less swollen and ulcerated patches in different places.

Syphilis. — Birch-Hirschfeld[2] has made two short communications in which he confirms the discovery of the presence of a micro-organism in the new growths of syphilis, already announced by Aufrecht. He examined numerous preparations obtained from broad condylomata, extirpated during life, and from an extensive gumma of the heart. In all of these he found parasites, which at first he considered to be of the nature of bacilli. More careful study convinced him, however, that these apparent rods were in reality several rather oval shaped micrococci joined together, the place of union being less distinctly marked than is usually the case. In the majority of cases they were also present in the form of diplococci as first described by Aufrecht. They are best demonstrated in the fresh specimen, by first clearing up the tissue with a strong solution of potash, and then mounting in glycerine. They then appear as strongly refracting bodies lying in the tissue, generally associated together in little clumps in the papillæ of the skin or in the cells of the adjacent rete Malpighii. In order to color them a little of the fluid is scraped from the base of a freshly extirpated tumor, dried upon a cover glass, stained with a watery solution of fuchsine or gentian violet, and mounted in Canada balsam.

The smallest cocci occur in the gummata of the internal organs, and they have not been detected at all in the cicatricial tissue.

Typhoid Fever. — Eberth and Klebs first described the occurrence of bacilli in the swollen Peyer's patches as well as in the lymph space in the external wall of the intestine. Meyer and Friedlander[3] have further studied the subject, and found that the arrangement of these bacilli in the tissues is essentially different from that of the bacteria of decomposition which are occasionally found there. They were most abundant in recent cases of typhoid swelling of the follicles, where there was not the slightest appearance of necrosis. On the other hand, they were absent from the swollen patches and follicles occurring in the course of scarlatina or measles. Thin sections of the intestine were made and then cleared up with acetic acid. The bacilli could be stained by placing the sections in one of the different basic aniline colors (gentian violet, bismark brown, methyl blue, or fuchsine), and allowing them to remain at a high temperature for some time. In the bacilli treated in this way a peculiar appearance has been observed, namely, uncolored spots, either vacuoles or spores, but which could not be determined with certainty.

Maragliano[4] has compared the blood taken from the general circulation and from the spleen of patients suffering with typhoid fever. The former was obtained by pricking the finger, while the latter was taken by aspiration. In the general circulation there were found isolated or agglomerated micro-organisms, sphere-shaped, homogeneous in appearance, and with a sharp contour, looking like micrococci. In the splenic blood, beside the spheroidal forms there occurred others which were staff-shaped, with a sharp outline, and sim-

[1] Schutz and Loeffler. Deutsches medicin. Wochensch., No. 51, 1882.

[2] Birch-Hirschfeld. Centralblatt f. d. Med. Wissen., Nos. 33 and 44, 1882.

[3] Meyer and Friedlander. Centralblatt f. d. Med. Wissen., No. 26, 1882.

[4] Maragliano. Centralblatt f. d. Med. Wissen., No. 41, 1882.

ilar to those described by Klebs and Eberth. During convalescence these disappeared entirely from the blood, and were also greatly diminished in numbers when the patients were put upon large doses of quinine.

Septicæmia. — Rosenberger [1] has endeavored to decide whether septic material which has been exposed to high temperatures acts still as an organic ferment or as a simple organic poison, like strychnia, for example.

A large quantity of powerfully acting septic material (blood or serum) was boiled, filtered, evaporated, and then injected. The animals died with the same symptoms, and the autopsy showed the same lesions as when they were killed with the uncooked poison. A very much larger dose, however, was required. A portion of this material, after being treated as above, was placed in a sterilized solution of meat extract. This remained clear for weeks, and the microscope failed to show any bacteria.

Two forms of septicæmia were distinguishable as recognized by Koch, Pasteur, and others. The first form was obtained by introducing a bit of decomposing muscle into the abdominal cavity of a rabbit, and then injecting subcutaneously into a second animal a little of the peritoneal exudation. In this form of the disease very few organisms are found in the blood, while in the œdema about the point of inoculation there occur a prodigious number of larger and smaller rod-like bacteria (Vibrions septiques, Pasteur) and micrococci. This form has received the name of "Pasteur's septicæmia" or malignant œdema (Koch). The second form is obtained by injecting blood which has been allowed to decompose for not more than ten days at the temperature of the room. In the blood of animals inoculated in this manner there are found small biscuit-shaped micro-organisms, which are entirely absent in the first form. This is called "Devaine's septicæmia."

In the first form he considered that the virulence was increased indefinitely from animal to animal, while in the second he considered that the height was reached after the fifth or sixth inoculation.

These two forms of septic material were further experimented upon separately, and the remarkable fact was found that the peculiar form of bacteria was reproduced in the inoculated animals even after the poison had been cooked at a temperature of 140° C.

The results of the experiments have been formulated as follows: —

It is evident that the micro-organisms are the same which are found in animals dying after the inoculation of cooked or uncooked septic material. Further, that the bacteria cannot be considered as primary, but secondary, or, in other words, they obtain their poisonous properties from the association with a chemical or unorganized poison. From this, however, it is not to be concluded that the bacteria are innocuous; on the contrary it is they alone which increase the septic poison in the body, for in sterilized cultivation fluids the cooked poison remains unchanged, and produces no bacteria. If, now, two sterilized fluids are taken, and to the one a minute quantity of cooked poison, and to the other a drop of the heart's blood taken from an animal which has been inoculated with a sufficient quantity of the same uncooked poison, is added, the first remains perfectly clear, and even in large doses produces no reaction when inoculated. The other, on the contrary, becomes cloudy over night, and has acquired such virulence that an animal can be killed within forty-eight hours by 0.2 cc. of the fluid.

The bacteria must then develop from the schizomycetes which are normally present in the body, but have taken on septic characters. [There seems to be a loop-hole for error in the above experiments in the fact that a very few spores may have escaped destruction, and found a much more favorable soil in the body for their development than in the artificially prepared meat extract, which was used for control. Rep.]

The same author [2] has made another communication relating to experiments pointing to the possibility of finding a means of protection against septic poison. As the result he concludes that septicæmia is not one of the diseases against which immunity can be obtained by any of the means at present employed.

Rossbach [3] has made observations on the part played by a purely chemical ferment in accelerating the production of bacteria. He found that after an injection of papayotin into the veins of a rabbit, which caused death in from one to two hours, there were a very large number of bacteria present in the blood taken from the heart. These were round and biscuit-shaped, moved quickly, and were stained deeply with aniline colors. This were not found if death occurred within fifty minutes. He instances this as a case where a purely chemical ferment, coming from a plant and free from organisms, has the property of so changing the blood that the spores which are normally present in the blood suddenly become capable of life and reproduction.

This fact adds weight to the idea that in a true infection the chemical ferment which is associated with the inoculated organic spores may not be without effect.

Erysipelas. — During the past year Fehleisen has published a monograph on the pathogenic micrococcus of erysipelas.[4] The presence of such a parasite in the capillaries and lymphatics has been described by several observers, but they have differed as to the *rôle* which it has played. Hüter believed that it was the direct cause, others that it was present only in pyæmic erysipelas, or else that it was simply the carrier of an unorganized poison, which was capable of producing the disease independently. The author claims to furnish the proof of the specific nature of this organism. He has found it present in thirteen cases, which were examined during life; from these cultivations were made, and afterwards successfully inoculated in man and other animals.

The micrococci were found arranged in chains, filling the lymphatics and lymph spaces of the skin and subcutaneous adipose tissue of the recently affected part. In the neighborhood was extensive small cell infiltration. They were not found in the blood-vessels as had been stated by the earlier observers.

To prove that their presence was not merely accidental, small bits of skin taken with antiseptic precautions were cultivated upon sterilized gelatine. In the course of two months fourteen generations had been produced. The cultivated form appeared as a whitish fibre, easily detached from the surface. Nine rabbits were inoculated in the ear with this product. In one the effect was merely a slight rise in temperature; in

[1] Rosenberger. Centralblatt f. d. Med. Wissen., No. 4, 1882.

[2] Rosenberger. Centralblatt f. d. Med. Wissen., No. 22, 1882.

[3] Rossbach. Centralblatt f. d. Med. Wissen., No. 5, 1882.

[4] Fehleisen. British Medical Journal, March 24, 1883.

all the others, after from thirty-six to forty-eight hours, the temperature rose, and a characteristic blush appeared. This gradually extended to the root of the ear, and thence over the head and neck. The course was run in from six to eight days without a single fatal termination. The fact that this was true erysipelas and not septicæmia was shown by the light-red color of the part, the absence of œdema or suppuration, and the presence of micrococci in the lymphatics of a bit of the affected part, removed during the height of the disease.

The inoculations made upon man are of still greater value in determining the ætiological relations. It was tried as a therapeutic measure in seven cases of new growth, in which spontaneous occurrence of erysipelas has been thought to have been followed by beneficial results. The first was a case of multiple fibro-sarcoma, the second of recurrent cancer of the breast, the third of recurrent intra-orbital sarcoma; of the remaining four two were cancer of the breast, and two were extensive lupus.

After an incubation of from fifteen to sixty hours severe chills and high fever set in, followed by a true erysipelas, running its characteristic course. This occurred in six out of the seven cases. The symptoms in some cases were very severe; in one there was threatened collapse, and in another a pleurisy occurred.

As to the results. In one case of lupus a cure was said to have been accomplished (in the other the inoculation failed). In the second case of cancer the tumors disappeared, and there had been no return. In the case of the fibro-sarcoma the tumors at first appeared to diminish in size, but afterwards increased. In the other cases of cancer and sarcoma no effect was produced. The same case was capable of being inoculated after two months, showing that the immunity against a second attack was of very short duration.

On the gelatine cultures a three per cent. solution of carbolic acid or a one per cent. solution of corrosive sublimate stopped the growth of the micro-organism within a few seconds.

[Although the physiological proof appears very conclusive in this case the absence of a characteristic color reaction or morphologically distinct form must prevent this from being accepted as a new species for the present, until these experiments are verified by other observers. Rep.]

Blenorrhœa Neonatorum. — Krause,[1] under the direction of Koch, has cultivated the micrococci found in the secretion of the eyes of new-born children suffering from purulent conjunctivitis.

The first cultivation succeeded at a temperature of 40° C. upon sterilized blood serum, and afterwards at ordinary temperatures. Pus was taken from twenty-two children, and from all of these a pure culture was obtained after the presence of the characteristic form had been determined microscopically. In two cases it was carried through forty-two and fifty generations.

In the secretion the micrococci are joined together in two in the form of a "semnel." This peculiar form is preserved in the cultured growth, the size of which varies considerably. Under a low power the culture appears as a grayish-yellow film, very slowly spreading out from the point of inoculation.

Upon old rabbits and young cats, dogs, or mice inoculation in the conjunctival sac or urethra was without effect. Subcutaneous injections were also without result, either of the pure culture or blenorrhagic secretion. In four new-born rabbits the inoculation of the cultivated form in the conjunctival sac was followed within twenty-four hours by a purulent conjunctivitis, which passed into a purulent ceratitis after ten days.

In five cases of granular conjunctivitis the examination and culture gave negative results as to the presence of bacteria.

Whooping-Cough. — Burger[2] has found in the sputa of whooping-cough a large number of elongated, elliptical bacteria; in some places closely packed together, in others scattered about over the field of the microscope. Under high powers constrictions were found indicating active subdivision. At times they were aggregated into strings or chains, or groups of irregular form. The author points out that these must not be mistaken for leptothrix buccalis, the spores of which are frequently seen in the mucus of the mouth, and have some resemblance to these bacteria. He submits the following conclusions as to their ætiological relations: (1.) This particular parasite is not present in other sputa. (2.) Their large numbers leave no doubt as to their influence. (3.) Their number bears a relation to the intensity of the disease.

The author hopes to bring forward further proofs of their pathological relations by further studies.

[1] Centralblatt f. d. Augenheilkunde, May, 1882.

[2] Burger. Berl. klin. Wochen., January 1, 1883. London Medical Record, March 15, 1883.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

C. M. JONES, SECRETARY.

January 15, 1883. Dr. Folsom presided.

CASE OF MENSTRUAL DECIDUA.

Dr. Boardman related the case, saying that he had reported it about a month ago to the Obstetrical Society, and was led to allude to it again as he had just received a fresh and perfect specimen of the membrane, expelled within the past week. The patient had been under treatment for about nine months for some nervous disturbances, by Dr. Denny, who referred her to him. At the commencement of her nervous affection she noticed the expulsion of this membrane, which had recurred at every menstrual period since, with one exception, always about twelve hours after the beginning of the flow, without any notable pain, and always, as in the specimen now presented to the Society, in two pieces, the superficial area of the two being nearly, if not quite, sufficient to cover the entire internal surface of the fundus. Previous to the nervous disturbances, to which allusion has been made, she had enjoyed very good health, had one child eight years ago, never miscarried, had always menstruated regularly and without pain, and had never observed the discharge of any membranous pieces. Examination revealed no disease or affection of the uterus or adjacent organs, except, perhaps, some undue sensitiveness and trifling enlargement of the left ovary. The term menstrual decidua rather than dysmenorrhœal membrane seems applicable to this case, as will appear from the history which has been related. And it may be added that the case may with good reasons be considered as confirming one of the theories which are offered in

explanation of the disease, namely, that a congestion of one or both ovaries gives rise to an irritation which is transmitted to the uterus and in that organ causes the development and discharge of the membrane.

DR. SABINE read the regular paper on

A CASE OF CARIES OF THE RIBS, WITH ABSCESS OF THE CHEST.[1]

DR. BOWDITCH remarked that he had seen no similar case. An early diagnosis would have been very difficult. But granting that the diagnosis had been made, that the abscess and carious rib had been discovered at the outset, what would have been the treatment? Would the removal of one or more ribs, in whole or in part, have been advisable?

DR. SABINE replied that, he thought his treatment would have been essentially the same as that actually directed. It is possible that all five of the ribs were even then affected, and an operation involving so many ribs could not be justifiable.

DR. BOWDITCH said that, with modern methods of surgery, one might safely remove the most of a rib. He referred to a case of empyema, where, in accordance with his advice, a part of a rib had been removed at the point where a passage into the chest was kept open. The operation was easy, and in six weeks the patient was better than for two years previously. We should not have too much dread of operation in such cases.

As illustrating the difficulties which may be met with in diagnosis, Dr. Bowditch referred to a case which had recently come under his observation, where there was great dyspnœa, obscurity of the sounds of the heart, and much apparent increase of the cardiac dullness. In a sitting posture the dullness extended outside the nipple, and as improvement was slow the question of tapping the pericardium was considered. On further examination, however, the abnormal dullness was found to disappear when the patient was put on his back. Probably the liver crowded up and displaced the other organs. The diagnosis of pericardial effusion is often extremely difficult, and the position of the patient should be changed before deciding that the sac is distended with fluid.

In response to a question by Dr. Cutter, DR. SABINE said there was no pigment present either in the spleen or the liver. Although the patient had served in the navy during the war and had lived long in the West, so that he had without doubt been exposed to malarious influences, yet there was no definite history or evidence that he had ever suffered from malarious disease.

DR. CUTTER referred briefly to a case in which there had been necrosis of the body of one vertebra and superficial caries of several other vertebræ and of the ribs. In this case was also some disease of the lungs and amyloid degeneration of other organs. There was much pus which had been discharged through the lungs.

DR. SHATTUCK remarked as regards the possibility of an early diagnosis, that if dullness and modified respiration had been found the inference would have been that the lungs were diseased. This would have had weight in determining the prognosis. One could not be expected to make out a disease so rare with so little attainable evidence.

In reply to Dr. Boardman's question if anything had been discovered by the probe when the abscess was first opened, DR. SABINE said that he did not use the probe. Furthermore, there was found to be a layer of muscle between the abscess and the external opening, so that the probe, if used, could not have reached the carious bone.

DR. BOARDMAN suggested that at the outset probably only one rib was affected. If the caries could have been ascertained at that time removal of one rib might have been feasible.

DR. SABINE said that this condition could not be determined when the abscess was first opened. From the history it would seem that pus must have worked gradually around and down the ribs, burrowing a long distance before coming to the surface.

DR. SHATTUCK remarked that even if the disease were confined to the first rib it would not be easy to decide to remove the whole or a part, especially if the disease began on the internal surface of the rib.

DR. SABINE said it was on the internal surface of the rib, and close to the large vessels, that the disease began, while the earliest pain complained of was beneath the posterior border of the scapula, thence shooting through to the front.

[1] Vide page 457 of this number of the JOURNAL.

TWO CASES OF FATAL HEART TROUBLE, WITH COMPLICATIONS.

DR. F. C. SHATTUCK exhibited the anatomical specimens and reported two cases from the Massachusetts General Hospital, as follows: —

T., a carpenter, born in Sweden, fifty-three years of age, came to the out-patient department of the Massachusetts General Hospital about the middle of October, 1882, suffering from dropsy, especially of the legs, and dyspnœa. The urine was free from albumen, the heart was very irregular in force and rhythm, enlarged, and the first sound, short and valvular in character, was accompanied by a murmur loudest at the apex. He had also the physical signs of œdema of the lungs and hydrothorax. The hospital being full he could not be admitted, so he was put under treatment and watched. He improved slightly, but gladly availed himself of an opportunity to enter the wards.

October 25th. The following history is abstracted from the records: His general health was good until three years ago, when he had rheumatism in his arms and legs, and this has recurred every winter since. Was sunstruck four months ago, soon after which he strained himself, and since then has had more or less dyspnœa on exertion and during the night. First noticed swelling of feet about three weeks ago. The bowels were regular, the tongue clean, and the appetite good. Moderate ascites.

Under rest and appropriate treatment he gradually improved, and, November 23d, after one month's stay in hospital, he was discharged at his own request. The ascites had disappeared, the œdema of the legs and lungs was very slight, and the heart's action was decidedly more vigorous, though still irregular.

December 29th. Was readmitted to the hospital with a return of his former symptoms in an aggravated degree and the addition of orthopnœa and cyanosis. Pulse 104; respiration 32; temperature 95.3° F. He was freely purged, and, the symptoms not yielding, January 3d ℥cxii. of serum was drawn off from the abdomen. After this he was rather more comfortable, but soon the temperature began to rise, the dyspnœa to increase, the sputa became very bloody, and he was delirious. He died January 11th.

Autopsy, twenty-eight hours after death. Sligh œdema of legs and abdomen.

Heart symmetrically enlarged at least one half, all its cavities being distended with clotted blood. The valves showed nothing abnormal. Muscular substance of walls increased in thickness, firm, and somewhat opaque. Under microscope healthy. Coronary arteries patent and voluminous.

Thrombosis without infarction in the branches of pulmonary artery of lower lobe of both lungs The upper lobe of right lung was firm and non-crepitant, and on section of a grayish opaque color.

Left kidney reduced in size, being less than closed fist. On section it was found to be converted into a series of cysts as large as cherries communicating with a moderately dilated pelvis, the cortex forming a thin wall at periphery. At origin of ureter was a reddish calculus, the size of a large bean, completely obstructing. Right kidney was enlarged at least one half, the capsule readily detached, the cortex swollen, and the tubular opaque.

The case presents some points of especial interest. The autopsy record shows that the heart muscle and valves were healthy, the organ being symmetrically enlarged. The most prominent cardiac symptom was extreme intermittency and irregularity, which must have been due to faulty innervation in this case. It seems to me not improbable that the sunstroke, not a severe one in its apparent immediate effects, may have enfeebled the cardiac ganglia or other nervous supply of the heart, and thus been the cause of the failure of the organ, intensified, perhaps, by the strain from lifting carwheels. According to the history the symptoms of serious mischief date from that time.

Secondly, the case is an example of incompetency of the valves simply from enlargement in the size of the cavities and weakness of the ventricular contraction. The physical signs show unmistakably that there was mitral regurgitation, which many of the text-books would lead me to think occurs only when the valves themselves are damaged.

Lastly, the perfect quiescence, as far as symptoms are concerned, of the calculus which blocked the left ureter.

G., a colored man, thirty-eight years old, a ship's steward, came to the out-patient department of the Massachusetts General Hospital December 5th, and was admitted to the wards the next day. He first noticed dyspnœa on exertion six months ago, and since then he has progressively lost strength; gave up work five weeks ago. He suffered from orthopnœa, and had some swelling of the ankles. The pulse was 94, regular, of fair strength, and of well-marked water-hammer character. The urine averaged about ℥xxiv. daily, and was free from albumen or sediment. The physical signs led to the diagnosis of aortic and mitral regurgitation, with œdema of the left lung and right hydrothorax. Digitalis was given, but this drug having no apparent effect, the fluid extract of convallaria majalis (lily of the valley) was tried in doses of five to seven minims every three hours with no better success, the hydrothorax increasing under its use. The aspirator was used December 19th, and ℥xxviii. of distinctly bloody fluid was withdrawn from the right pleura. There was some improvement in the symptoms for a day or two after this, but soon the general œdema increased, extending to the face and hands, the dyspnœa became more urgent, and, January 11th, he died.

Autopsy sixty-four hours after death. Legs œdematous. The heart dilated, being increased to the size of two fists. Cavities distended with blood. Both ventricular cavities largely dilated; walls of normal thickness. Aortic valves thickened, irregularly contracted, and their free edge rounded. Mitral valve admitted four, and the tricuspid five fingers. Orifices of both coronary arteries, especially the right, diminished in diameter.

Left pleural cavity obliterated by old adhesions, the lung being distended. Right pleural cavity contained forty-two ounces of reddish fluid without fibrinous clots. The pleural surface was thickened and opaque. The lung was contracted into a rounded, lobulated mass, occupying one fifth of normal area, and bound down by adhesions. There was passive congestion of the abdominal organs.

At the time of the entrance of the patient into the hospital I showed him to my class in ausculta-tion, and remarked on the absence of signs of effusion into the left pleural cavity, although the right cavity evidently contained a considerable amount of fluid. Although in cases of hydrothorax the amount of fluid is often greater in one pleura than in the other, it is unusual to find it considerable in one and none in the other. This fact led me to diagnosticate simple hydrothorax with some reserve, and my suspicions that the patient was suffering from something more than simple stasis of the blood behind the mitral valve were confirmed by the subsequent course of the disease. The situation of the patient was favorable, the heart's action seemed fairly strong, but still he grew worse, and the fluid in the right pleural increased in amount, and on aspiration was bloody; moreover, the relief afforded by the operation was very transitory. These anomalies are all explained by the autopsy, which showed that the right lung was so bound down by adhesions that it could not expand; that the right pleura was itself inflamed; and that, the left pleural cavity being obliterated by old inflammations, the formation of hydrothorax on that side was impossible. We also see that no conclusions can be drawn from this case either for or against the virtues of convallaria, and we have in the tricuspid valve, which admitted five fingers, but was not otherwise diseased, another example of valvular incompetence due simply to increase in the size of the cavities and consequent undue separation of the attachments of the valves.

DR. W. L. OTIS reported

A CASE OF SLOUGHING OF THE MUCOUS MEMBRANE OF THE BLADDER FROM CYSTITIS FOLLOWING CONFINEMENT.[1]

DR. BAKER said he had often seen sloughs from cystitis, but never one so large as this. The great complication which we have to dread after gynæcological operations is cystitis, and it is often difficult to avert or subdue. He recalled one case among his earlier operations which was especially severe. The symptoms were similar to those described by the reader, except as regards relaxation of the neck of the bladder. The hæmorrhage in this case was so great that injections of solution of argentic nitrate were necessary to control it. A large slough subsequently came away, and weakness of the bladder continued for a long time.

Cystitis was formerly much more common after operations about the uterus, vagina, or bladder than at

[1] Vide page 458 of this number of the JOURNAL.

present, and the severity of the disease when it does appear has also diminished. This favorable change was ascribed to changes in the method of treatment. Formerly it was his custom, as soon as ammoniacal urine and pus appeared, to begin at once the use of the catheter and regular washing out of the bladder. The difficulty was materially lessened by this procedure. But about four years ago he began the use of ammonium benzoate as soon as the urine showed an alkaline reaction, and the drug was pushed until the urine became acid again. The results of this treatment have been very favorable, and he has had since very little trouble from cystitis, either in hospital or private practice.

DR. MARION recalled a case which he had reported eight years ago, where he had found on his second visit to the patient a slough from the bladder five or six inches square. It contained mucous tissue, muscular fibre, and crystals. The thumb could be easily passed into the urethra. The patient was an invalid from incontinence of urine for more than a year, so long as she remained under his observation. He had not tried electricity in this case, thinking it would be useless.

FEBRUARY 5, 1883. DR. MINOT presided.

DR. PORTER reported a

CASE OF PLASTIC OPERATION FOR A BURN OF THE ARM AND HAND,

and showed the patient still in his apparatus.

The accident occurred about twenty months ago, and had resulted in a cicatricial contraction of the forearm and fingers. Over the extensors of the hand the patient had no control, and even by force only a very little extension could be made. The fingers were firmly flexed into the palm. The cicatrix extended from the edge of the radius on the outside to the edge of the ulna on the inside, involving the palm and the anterior surface of the arm to above the middle, and the hand was completely disabled. No chance for a flap from the arm was presented. The cicatrix was dissected out, the hand was then made fast to the side and a flap taken from the abdominal wall in such manner that the extremity was at the median line between the umbilicus and pubes while the pedicle was left at the side below the ribs at such point that it was likely to receive a good blood supply from the lumbar and ilio-lumbar arteries.

To secure immobility of the arm and body the frame recommended by Dr. Watson for hip and spine disease was used with the addition of a "bay window" of soft iron to support the hand.

The operation was performed on December 31, 1882, and the Callender dressing applied. The subsequent history had been uninterruptedly good except for an attack of erysipelas, which however did not seem materially to retard the process of repair. The wound needed to make the flap was so enormous that he had hesitated to cut away all the cicatricial tissue on the periphery. There was therefore not a perfect blood supply from this source and the flap would have become loosened if new sutures had not been added two or three days after the operation was performed. Union has now taken place under the flap as well as along the edges, the abdominal wound is healing rapidly with the aid of skin grafting and a thin protective coating resembling tulle, and in every respect the case is going on favorably.

In conclusion Dr. Porter spoke of the great convenience of the frame as insuring steadiness of the parts and convenience of the dressings, it being possible to lift the patient from the bed to a head and foot support, so as to examine the wound from underneath without disturbance of the parts.

DR. F. C. SHATTUCK read

A CASE OF OBSCURE FATAL NERVOUS DISEASE.[1]

DR. WEBBER said that he saw the patient with Dr. Shattuck and at first had doubts as to the correct diagnosis. The fact that the symptoms were unilateral, had varied so little in their nature, and some other considerations, raised the question whether there might not be an organic lesion. But as there had been great improvement, while the symptoms were similar day after day in nature, yet varied in intensity, as the patient was evidently suffering from nervous exhaustion he was led to believe that there was only functional disturbance. The disturbance in the left arm might readily have been due to an over-use of that arm in embroidering, and as not unfrequently happens when there is nervous exhaustion the over-taxed limb was first to fail.

It is not uncommon to find failure of power or paralysis arising from disturbance of the circulation. He mentioned such a case where several attacks of paralysis with complete intermissions were seen in a patient where after death there was no lesion found to explain the symptoms. In another patient only disease of arteries was found to explain paralysis, there being no coarse lesions.

In the case now before us nervous exhaustion seemed the most satisfactory diagnosis when she was seen, but with the subsequent history as given by the reader the question would again arise whether there may not have been a more serious condition, at least some degenerative change.

DR. EDES said that it seemed to him that the case should be classed with those functional cases such as had been mentioned by Dr. Webber, and he referred to a case of an old woman, who had had repeated attacks of delirium and hemiplegia, the intervals being completely free from such manifestations. At the autopsy in this case there was found nothing abnormal except atheroma of the arteries, and he thought it probable that some such condition as this existed in the case reported by Dr. Shattuck.

In reply to a question by Dr. Putnam as regards the electrical reaction of the muscles, DR. WEBBER said the muscles were tested by the faradic current and responded reasonably well, but there was a slight loss of reaction on the left, not so great however as to lead to a suspicion of muscular degeneration.

DR. PUTNAM said that it seemed impossible to arrive at a definite diagnosis in the case. The symptoms were not those of a typical case of chronic bulbar paralysis, especially if, as Dr. Webber had stated, the muscles did not show signs of atrophic degeneration. The possibility that it was a pseudo-bulbar paralysis, of cerebral origin, should be borne in mind. The fatal ending of the case did not, however, rule out the diagnosis of purely functional disease. He had some years ago seen in consultation a case in which, after careful examination, nothing could be discovered but extreme

[1] See p. 460 of this number of the JOURNAL.

nervous debility, with especially great fatigue in the use of the voice. The patient was sent to a water-cure, and died soon after without the appearance of new symptoms. In fact this difficulty in using the voice is not a very uncommon thing in cases of neurasthenia. The drooping of the eyelids also is sometimes met with, especially with elderly people. Finally, it is not to be forgotten that the presence of functional disease by no means excludes organic disease, and *vice versâ*. Both are often met with together, and their effects have to be carefully isolated.

DR. WEBBER. That last remark is important. A double diagnosis is often necessary to explain all the symptoms. The functional and organic conditions may coexist at the outset, or the functional and circulatory disturbances continuing may result in organic affections. It may, therefore, be sometimes necessary to change the diagnosis in the course of a sickness.

DR. MINOT. As regards difficulties of diagnosis, not only may the actual disease change from time to time, but with the same disease there may be alternations of symptoms or variations in their severity. In general paralysis of the insane, for example, speech may be impaired, and then improve very much. Such peculiarities are very apt to appear in cases of tumors of the brain, and especially with those of syphilitic origin. Thus in the case of a physician who had a gummy tumor of the brain, there was staggering, difficulty in swallowing, and of speech. These symptoms disappeared under appropriate treatment, but subsequently autopsy revealed the presence of the tumor.

DR. F. C. SHATTUCK read

A CASE OF EMPYEMA EVACUATING ITSELF THROUGH THE LUNG, WITH RECOVERY.[1]

DR. BOWDITCH asked if there were clinical facts to confirm the theory, advanced by the reader, that a small is more likely than a large effusion to be evacuated through the lungs.

DR. SHATTUCK replied that he had merely offered it as a suggestion. He had no facts on the subject, but it would seem that with the lung compressed by a large effusion the lung tissue would be less likely to be torn by any spasmodic action.

DR. BOWDITCH said that the case was interesting for its great rarity. He had not seen more than two or three such during his life. When an opening takes place in this way it is nature's method of relief, and recovery generally follows. He would make a favorable prognosis in such case, where proper measures of sustaining the strength were used.

DR. C. E. STEDMAN had seen two or three cases of empyema discharging through the mouth. Of one he had special recollection. The patient was a young married Irish laborer, in perfect health till he was exposed to wet and cold at Christmas time. He was forced to take to his bed with chills, severe pain in the chest, a dry cough, fever, and dyspnœa, from the day after which he had medical attendance. The symptoms rapidly increased in severity, with evidences of filling of the left chest with liquid, till it became soon apparent that operative interference would be demanded for what was diagnosticated acute pleurisy with effusion. But on the tenth day after the access of the disease the physician was called suddenly to find that the patient, in a paroxysm of coughing, had raised a pint of fetid purulent matter, which continued to be discharged for several days with relief to the symptoms. On the day after the bursting upwards of the matter Dr. Bowditch, who had seen another patient of the speaker's that day in consultation, kindly visited this man. Speedy convalescence followed, and all physical signs gradually disappeared. This case is mentioned on account of the rapid course as well as the unusual termination of an empyema, being only ten days from the start to the finish. Another hospital case of long standing, of which the diagnosis had been very obscure, terminated as suddenly and favorably by an unlooked-for discharge of pus through the mouth. These patients had given the speaker a disposition to make a favorable prognosis in similar cases of young subjects with acute symptoms. As regards the question whether evacuation through the lung was more likely to take place from a small or large effusion, in his first case the pleural cavity was full, and the lung must have been thoroughly compressed, yet the rupture into the lung had taken place.

DR. SHATTUCK said he also had considered the expectoration through the lung a favorable circumstance, and was surprised on looking up the subject to find that some authors, notably Bensel (?), considered the prognosis very bad after such occurrence.

DR. KNIGHT said that he thought the prognosis in case of an empyema opening into the bronchi would depend largely upon the duration of the disease, and the character of the contents of the pleural sac, being more favorable in a case of short duration, and more unfavorable in an old case where there were large shreds of lymph in the pleural cavity which could not be expectorated, and which would continue to act as foci of infection. These latter cases need a free counter-opening, and washing out of the sac. He had never seen spontaneous cure, had never seen a case which he did not feel would be better for the external opening through the chest.

DR. BOWDITCH spoke of the importance of operating early in cases of pleuritic effusion, and said that we ought never to wait *at all* when *orthopnœa* is present, with effusion as its cause; that if we did wait twenty-four hours, death might ensue. In cases that he had met with, we might tap within four days after the attack and without regard to the temperature or the pulse.

DR. J. S. GREENE reported

A CASE OF OBSCURE AND RAPIDLY FATAL DISEASE[2]

attended by extensive painful tumefactions of the skin.

DR. FIFIELD in reply to the questions of Dr. Greene declared the case reported to have been perhaps the most extraordinary one he had ever seen. So perfect had been the simulation of abscess that he had punctured the swelling on the right side beneath the axilla with a full belief of obtaining pus. The following day the prominence had become flattened and resembled exactly the appearance that the tumors of erythema nodosum assume at the period of their decline.

Duhring says,[3] of the swellings in this disease, that they have a shining, tense look, as though suppuration were about to take place. This process, however, never occurs, for they invariably result in absorption. Page 146, he says, "the tumors, at times, resemble

[1] See page 461 of this number of the JOURNAL.

[2] See page 462 of this number of the JOURNAL.

[3] Op. cit. page 144.

threatening abscesses." He also says, "for size they vary from a small nut to an egg." Of its pathology, "Its exact nature is involved in uncertainty."

Hebra appears to think that in some cases at least it is an inflammation of the lymphatics. Bohn, that each tumor is an inflammatory infarction caused by embolism of the cutaneous vessels. Most authors consider the disease to be a form of purpura, allied to purpura rheumatica. "In some instances the exudation is of a serous character, but in *most* instances it is hæmorrhagic."

Since I made these or similar remarks I have seen a case of rather severe diphtheria, followed by well marked erythema nodosum. The tumors were situated on the legs, producing pain and lameness.

I have a belief that this case of which Dr. Greene has spoken was the result of some constitutional poisoning. I questioned the man as to his having partaken of fish, or lobsters, or clams, remembering the frequent cases of urticaria pustulosa we used to see in the Skin Department of the City Hospital. In reply, the patient said that he had been keeping the fast of the Ascension, and had been living principally on salted herrings, but had felt no inconvenience from them. In that clinic so accustomed to these cases did we become, that when one presented itself we immediately rehearsed the diagnosis before the patient spoke. "Nova Scotian; came up on a sailing vessel; had a long passage; lived on herring." I also recollect being called at night to see a woman who, being at work shelling clams, had thoughtlessly swallowed one. I say thoughtlessly, because she told me that many years before she had very nearly died from eating clams and had resolutely refrained from taking any since. When I saw her she was very pale, cold; very thready, almost imperceptible pulse; in fact, in a state of collapse, although not more than half an hour had passed since the clam had entered the stomach. I gave an emetic, which acted promptly; the clam was discharged, and all symptoms of collapse disappeared.

I am aware that the term urticaria pustulosa is not found in the treatises on Diseases of the Skin, but it was used by Dr. Damon to describe the cases to which I have referred.

In reply to an inquiry by Dr. Reynolds if the appearance of the skin over the tumefactions was that of erythema, Dr. Greene said that the skin over the swellings was yellow, but this was the general aspect of the skin throughout the body.

Dr. Minot suggesting poisoning as a possible explanation of the phenomena of this case.

Dr. Gannett suggested the possibility of the condition being one known as "malignant œdema;" an affection first observed by Pasteur in his investigations on splenic fever in animals, but later described more accurately by Koch, who succeeded also in isolating the specific bacillus.

It is a rapidly fatal disease, characterized by the presence of a considerable amount of serous fluid and foul gas in the subcutaneous connective tissue, thus giving rise to a considerable tumefaction of the skin.

Except in the character of the product it resembles a phlegmonous inflammation.

The only cases observed in man, so far as Dr. Gannett knew, were two reported by Brieger and Ehrlich, of Berlin, occurring after a subcutaneous injection of tincture of musk, in the legs of patients ill with typhoid fever, there being a localized necrosis at the seat of the injection, followed rapidly by œdema extending to the trunk; finally, death.

The œdematous fluid showed an abundance of bacilli, which in size and form corresponded with those described by Koch as specific of malignant œdema, and which on injection in animals produced the characteristic disease.

Dr. Bowditch suggested that the kidney disease alone might have been the cause of death.

Dr. Parks considered that the condition of the kidneys was more likely secondary, and corresponded to that generally found in acute poisoning, from whatever source.

Dr. Gannett remarked that in all septic processes the kidneys are affected as reported in this case. It may be, perhaps, a case of septicæmia simply.

Dr. Fifield said that there was without doubt a septic process going on, but the appearances were gigantic. He had found nothing like it in literature.

VENESECTION *vs.* BROMIDES IN ECLAMPSIA.

Dr. Bowditch asked for information of Dr. Reynolds whether the modern therapeutics of women in the puerperal state favored venesection, if convulsions occurred in a perfectly healthy woman, or whether the use of potassium bromide in large doses was considered better in such cases. And in this connection he referred to a case, of which he had heard, in which a perfectly healthy woman had died undelivered of a six-months' fœtus and in convulsions, with final apoplectic symptoms. Venesection was not resorted to, but large doses of potassium bromide were given up to a very short time before death. It appeared to him that the profession was doing, in regard to venesection, in many cases, what human nature tends always to do; viz., going to extremes. Having used venesection absurdly and extravagantly fifty years ago, we were now, in an equally absurd and extravagant way, *never bleeding*. From his former experience while a general practitioner, when he bled in small quantities in cases of threatened abortion, he felt sure that venesection, properly used, was beneficial and prevented the miscarriage. So in the case alluded to, he regretted that venesection had not been used.[1]

Dr. Reynolds said he thought that the profession as regards this subject was divided into two parties. Some believe it is the sheet anchor in such cases, while another party relies on internal medication. He knew of several cases in which venesection had resulted favorably. In one case in which the urine was highly albuminous the patient had been bled, delivered with forceps, and made a good recovery. In another case where pregnancy was eight months advanced, without appearance of labor, there had been nine convulsions. The patient was bled, she was delivered forcibly under ether, and also recovered perfectly. If the child is viable or the danger is so great that the child is not important we should not hesitate. If the patient has convulsions, if the urine is loaded with albumen, what can you gain by temporizing? What can you hope from delay?

Dr. Edes said that he was not an opponent of

[1] Since the meeting Dr. Bowditch has learned that the small pulse prevented the operation. But as the patient was above the common size and had been, up to the actual attack, in perfect health and usually of florid complexion, it still seems to him that the operation could not have harmed her, although it might not have cured her.

venesection, but he did not think it was necessary in the case first referred to by Dr. Reynolds, of which he had personal knowledge. The patient was a multipara, and had never had convulsions. There was no alarming symptom except the presence of albumen in the urine, and there was no sufficient reason to think she would not get through without resort to this means. He advocated bleeding in suitable cases, but did not think that this case could be cited to prove the usefulness of this procedure.

DR. REYNOLDS said that he had not himself seen the case referred to, and knew of it only by report. He was inclined to think favorably of bleeding in eclamptic attacks, but the better manner of treating cases of apprehended danger is to watch them carefully before the time of confinement arrives, securing regular sleep, giving simple diet and appropriate tonic remedies. Too little attention is paid to preparatory treatment in the care of pregnant women. If this point were attended to the results of private obstetric practice would be much better.

DR. WEBBER said, as regards potassium bromide, there was a tendency to overdose patients. Because this drug is good for one kind of convulsion, as epilepsy, it does not follow that it is good for eclampsia. Even in epilepsy it may be pushed too far. He recalled in this connection a case of a man who had a history of occasional epileptiform attacks, for whom potassium bromide was ordered. The doses were enormous, amounting to six hundred grains daily. A very curious train of symptoms followed, which ceased on omitting the bromide. He has seen delirium brought on by its excessive use. In one case a patient was reported to have cerebro-spinal meningitis. She was hysterical; had been overdosed with potassium bromide, taking one hundred and fifty grains daily for quite a long time, when delirium set in. The trouble was simply excess of bromide, and with its disuse the symptoms of the suspected disease disappeared. Such cases suggest that more than the usual caution should be taken in prescribing this drug.

PENNSYLVANIA STATE MEDICAL SOCIETY.

THIRTY-FOURTH ANNUAL MEETING.

THE State Medical Society of Pennsylvania convened at Norristown in its thirty-fourth annual session on May 9th, and remained in session three days, Dr. William Varian, of Titusville, President of the Society, presiding. The registration list contained the names of 306 delegates and permanent members; it was one of the largest and most successful meetings ever held by the Society. The papers were unusually numerous, and almost without exception were of good quality; the proceedings were singularly harmonious and well-conducted. The time of the sessions was so occupied by the addresses and essays that there was very little time left for discussion, and this was perhaps quite natural, since no provision had been made by the Society for a stenographic or other report of extemporaneous remarks. The entertainments provided by the Committee of Arrangements, of which the venerable Hiram Corson was chairman, were not allowed to encroach upon or interfere with the more serious business of the Society. On the first evening, after the delivery of the President's address, a banquet was given to the members of the Society by the Montgomery County Medical Society; on the second evening receptions were given at the private houses of Dr. J. K. Weaver, Dr. Mary Stinson, and of Mr. and Mrs. Geo. W. Rogers. On Friday evening a reception was given by the Faculty of the Philadelphia Polyclinic, and the Hospital for Skin Diseases. On Friday morning the Association adjourned at eleven o'clock and paid an official visit of inspection to the State Hospital for the Insane for the Southeastern District, about a mile from Norristown, where a bountiful collation was served, and the Society held its afternoon meeting in the chapel of the hospital.

First Day. At ten o'clock A. M. the President called the meeting to order, and the proceedings were opened by prayer. The Secretary read a list of the members present, and Dr. Hiram Corson delivered an eloquent address of welcome.

The delegates appointed to attend the last meeting of the American Medical Association reported some of the leading features of the memorable St. Paul meeting.

The Corresponding Secretary read a communication from the Chester County Medical Society advocating the preliminary preparation of students in medicine, and presenting a list of subjects for such examination.

The Librarian, DR. BENJ. LEE, called attention to the neglected condition of the State Medical Library, and offered a resolution for its improvement, which was lost.

A STATE WITH NO BOARD OF HEALTH.

The report of the Committee on State Board of Health stated that Pennsylvania is now one of eight States in this Union that is unprovided with a health board. At the last session of the Legislature a bill carefully draughted for this purpose was before both houses with a good prospect of success, but at the last moment an amendment, making it obligatory upon the Governor to appoint adherents of an exclusive dogma in medicine, was offered, and not being acceptable to the medical members of the Legislature the measure was finally lost. The report was closed by an appeal to the members of the Society and of the editorial fraternity to urge the necessity of a central sanitary supervision in this State, and calling attention to the saving of health, life, and wealth, which could be effected by it.

The Committee of Publication announced the delivery of the 1,700 copies of the Transactions of 1882 to the members and others, and presented a bill for $1,257.84, which was ordered to be paid.

The Committee on

PRELIMINARY EDUCATION OF MEDICAL STUDENTS

presented in accordance with direction of the Society a schedule of subjects for examination prior to entering upon the study of medicine, for the use of examiners of the various county medical societies, through their chairman, Dr. Oscar Allis, of Philadelphia. They recommended the following branches: (1.) A written statement previously prepared setting forth the candidate's course of study. (2.) An essay. (3.) Writing from dictation. (4.) Spelling, oral and written. (5.) Reading. (6.) Geography. (7.) Botany. (8.) Chemistry. (9.) Natural philosophy. (10.)

Mathematics — arithmetic complete; algebra, through quadratic equations; geometry, through plain geometry. (11.) History, ancient and modern. (12.) Political Economy. (13.) Geology. (14.) Language — English, Latin, and Greek. (15.) Logic and drawing.

The committee, in conclusion, called attention to a standing resolution of the Society adopted in 1878, that any county medical society refusing to carry out this plan of preliminary examination will forfeit its right to membership in the State Medical Society.

On motion the report was referred to a committee of one from each county in the State, for further consideration and correction, to report before the close of the session.

The Secretary announced the names of the Nominating Committee.

CODE OF ETHICS.

Under new business the following resolutions were offered by Dr. Henry H. Smith, and were unanimously carried: —

Resolved, That the State Medical Society of Pennsylvania reaffirm its approval of and adhesion to the Code of Ethics adopted by the American Medical Society.

Resolved, That organized opposition by a local society, or by individuals, to the Code approved by the medical profession of the United States is *rebellion* against the constituted authorities, and should be so treated.

Resolved, That the Secretary be instructed to forward a copy of these resolutions to the Committee of Arrangements, at Cleveland, Ohio, for presentation to the Association.

WRITERS' CRAMP.

Dr. BENJAMIN LEE exhibited two devices for the relief of patients suffering with writers' cramp; they were pen-holders of such construction as to be held by the hand instead of in the usual manner by the thumb and finger.

The afternoon session was opened at two o'clock with a paper by Dr. WM. M. WELCH, of Philadelphia, on

THE WEARING OUT OF VACCINE PROTECTION, AND THE EFFICACY OF REVACCINATION.

He advocated revaccination, and believed that the virus became weaker in its protective power by long transmission through the human system. He concluded that if vaccination be efficiently performed in infancy, and revaccination at puberty, the greatest amount of protection will be realized, and small-pox may be extirpated from the face of the earth.

Dr. JAMES TYSON read the Address in Medicine, confining his attention to

MALARIAL HÆMATURIA,

which, he said, is a rare disease and seldom occurs in this latitude. During his practice he has met with but seven cases, — of these five were in Pennsylvania, one in New Jersey, and one in North Carolina.

After considering the pathological characters and diagnosis he dismissed the treatment, with the recommendation to use quinine either alone or with mercurials. The quinine may be given hypodermically. In addition restorative measures, and especially stimulants, are needed. Turpentine has been used in large doses.

The most effective treatment was found to be the drinking of the water of the alum springs. There are several of these springs in Virginia and one in New York.

The disease is divided into the mild and malignant types, the latter of which abounds in the tropics and to a small extent in the Southern States. Recent investigations have shown that this disease is on the increase in the Southern part of the United States.

Dr. R. S. SIBBELL, of Carlisle, read some

OBSTETRICAL NOTES,

giving statistics of 120 cases, in which the forceps were used in about six per cent. of the cases. One maternal death, and thirteen infants were reported. He also referred to some cases of placenta prævia and dystocia, and concluded with some good advice to the younger practitioners about the conduct of the lying-in chamber.

Dr. HUGH HAMILTON, of Harrisburg, delivered a lecture upon

ARTIFICIAL ALIMENTATION OF INFANTS,

in which the physiology of digestion was especially considered. He recommended an artificial food consisting of cows' milk, rendered alkaline, if necessary, by bicarbonate of sodium, cream being added in the proportion of an ounce to the pint. This is to be heated to 131° Fahr., and sweetened with lactose.

Dr. R. W. CHASE, of the Norristown Hospital, read a paper on

INSANE ASYLUMS AND THEIR RELATIONS TO THE COMMUNITY,

in which he deplored the popular clamor with regard to abuses in our reputable asylums, and denied that improper means could escape detection. He had not met with a case of improper confinement in 3,000 cases which had come under his charge.

The paper of Dr. Chase was discussed by Dr. Parrish, of New Jersey, and Drs. Hiram Corson, S. S. Schultz, Stewart and Ulrich, indorsing the views expressed, and condemning a sensational and mischievous paper which had been read before the Association for the Protection of the Insane, but which had been thrown out of the Transactions of that Association by the Committee of Publication. Dr. Corson believed that there was not sufficient provision made for affording outdoor treatment to a class of weak-minded and harmless lunatics who are now incarcerated in hospitals, but would be much happier outside. He thought that this applied particularly to women who are kept in by their husbands, and cannot be removed without their husbands' consent. He hoped that retreats or homes might be furnished for such patients where they will not feel that they are in an asylum.

DR. DEF. WILLARD gave a demonstration of

A MEANS OF CURING CLUB-FOOT

without resorting to expensive apparatus, and if begun early enough it might obviate tenotomy. The plan was merely to encircle the fore part of the foot by a bandage like felt, sole-leather, or gutta percha and have a similar one around the calf, and to connect the two by an artificial muscle of rubber (using the ordinary stationers' rubber bands of various sizes) in such a way as to assist the weakened muscles in opposing the contractured ones. This method should be supplemented by

manipulation and the usual hygienic and constitutional treatment.

In the evening DR. WILLIAM VARIAN delivered the

ANNUAL ADDRESS OF THE PRESIDENT

at the Court House. In it he dwelt upon the work and growth of the State Society and spoke of work yet to be accomplished. Calling attention to the need of more enlightened treatment of the inebriate, whose organs are in a state of disease due to chronic alcoholism, he spoke of the great improvements that have been made in the treatment of the insane and feeble-minded from other causes than alcohol, and declared his conviction that some such steps should be taken on behalf of the equally unfortunate victims of alcohol, who are too often treated as felons, and thrust into the workhouse or jail, then discharged with enfeebled mind and body to again encounter temptation, without having obtained strength to resist their depraved instincts. The frequent repetition of this course soon produces a real criminal, or else ends in a pauper's grave or an insane hospital.

The orator closed his address by an appeal to the non-medical portion of his audience to encourage higher medical education, to sustain efforts to obtain legislation for sanitary purposes, and to advance State medicine, and recommended the endowment of chairs in established medical schools in preference to starting new enterprises, thus enlarging the usefulness and lessening the expense of a generous medical education.

Recent Literature.

The Transactions of the American Medical Association. Instituted 1847. Volume XXXIII. Philadelphia. Printed for the Association, 1882.

This volume of 669 pages represents the work of the American Medical Association as presented at its annual meeting at St. Paul in June last. If the action of the Association looking toward the journalizing of its transactions be carried out, this will probably be the last time that the papers presented before the Society are published in a single volume. If the requisite number of subscriptions is pledged to warrant the issue of a Journal of the American Medical Association, the articles or at least a part of them, will of course appear more promptly than now, but the present method certainly gives them to us in a substantial, readable, and permanent form.

— A writer in the *New York Medical Journal* says that in Buffalo, N. Y., there are nine free dispensaries either under way or starting. Further he says: "Under the pretense of charity the physicians thus seek to advertise their names to the public, and jealousy has caused the dispensary mania to become epidemic, no one wishing to be outdone by another in the scramble for a vast acquaintance."

— It is understood that the Marine Hospital Service is to have control of the $100,000 appropriated for the protection of the Southern cities during the expected epidemic of yellow fever the coming summer.

Medical and Surgical Journal.

THURSDAY, MAY 17, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

DISCHARGED LUNATICS.

A FEW days since Chief Wade, of the Massachusetts State Police, was shot at by an insane man named Brennan, two shots taking effect upon his person. The shooting occurred at the Chief's office in this city. Brennan had been committed to the insane asylum at Danvers three times since July, 1881, but remained only a few weeks each time. He had also served at least one term at Deer Island for drunkenness. He had various imaginary wrongs, for which he had been harassing the police, among whom he was generally known as a crank, though not apparently considered dangerous. On the day of the assault he had provided himself with a revolver, and visited, evidently with homicidal intent, several officials against whom he had fancied grievances. None of his intended victims were in, however, until he found the Chief of Police. Among those who were so fortunate as to escape was Dr. Jelly, who in his official capacity as a member of the Board of Directors for Public Institutions had committed the man to the asylum. Another examination of Brennan since his arrest shows him to be possessed of all sorts of vagaries, and, as his actions have proved, to be a very dangerous person. The significance of the case consists in the fact that after his mental condition had been fully recognized, and he had been at three separate times put under restraint, he was so quickly allowed to go at large. We are happy to say that the blame for this action is not to be borne by the medical authorities who have had him in charge. Dr. William B. Goldsmith, physician and superintendent of the asylum at Danvers, in a communication to a daily paper, puts the responsibility where it belongs. It seems that Brennan was discharged from the hospital May 16, 1882, not by the advice of the hospital authorities, but because of the action of the Overseers of the Poor of the town of his settlement, who removed him in order that they might care for him more cheaply. Dr. Goldsmith wrote to these Overseers of the Poor at the time and informed them that Brennan entertained delusions which were liable to render him dangerous at any time, and he expressed the same opinion verbally. According to his showing, therefore, the Overseers of the Poor referred to (the name of their town is not mentioned by Dr. Goldsmith) assumed a grave responsibility in removing him and in subsequently setting him at large upon the community.

On inquiry we learn that the legal settlement of Brennan is in the city of Lowell, in whose quota he enlisted during the war. The cost to that municipality of maintaining him at Danvers would have been three dollars and a quarter per week, certainly not an exorbitant sum when it is remembered that this pays his entire expenses, including medical treatment. It is customary for the officers of any State institution which receives an inmate whose maintenance belongs legally to any town or city, to notify the local Board of Overseers of the Poor that such an individual has entered the institution, and that the town where he claims settlement may either remove him, and assume the care of him themselves, or at their option may leave him where he is, paying to the State the actual cost of his keeping. In the case of common paupers and cripples this rule works no injury, so far as we can see, to any one, for the pauper is a voluntary applicant for support, and in case his town removes him from a State institution he will claim assistance of the local board, which must be granted him. If, owing to exceptional facilities, the town is able to maintain its paupers at a lower rate than the State, the town would seem to be entitled to the privilege of saving the difference. But with the pauper insane the case is by no means the same. The town can make application, as in the present instance, for the discharge of its ward, signifying its intention of providing for him itself. But when it is allowed to place him on a par with the other paupers, and to limit the assistance furnished by his demand therefor, an immediate difficulty arises. Taken away from Danvers to his own city he is asked by the local board, "What do you require?" and promptly answers "Nothing." The local authorities then disclaim any further responsibility. Their bill from the State ceases, and it is not replaced by an expense in their local almshouse, as it would be in the case of their other paupers. Meantime (as in the present case) a walking powder magazine may have been sent forth upon the community, and oftener than otherwise the explosion occurs at a distance from where its causation was allowed. If the lunatic returns at once to his legal residence self-protection may prompt its authorities to restrain him again. But it more frequently happens that his present residence is remote from his legal domicile; he may not even know where the latter is. The tendency of such persons is to the larger centres of population and excitement, and it is in such places and upon their more conspicuous inhabitants that the vagaries of these men are wreaked.

In the interest, then, of public safety it is absolutely essential that the seclusion of such dangerous characters be not made to depend upon the chance philanthropy of local boards in behalf of men whom they never have seen, and know only as having stood upon their quota-roll twenty years ago. If, as seems likely to be the case, the cost at which the State provides for her own insane be as low as it can be afforded, all dangerous pauper lunatics should be placed in State asylums, and the cost of their maintenance *collected* from the municipalities owing them a settlement. In other words the local authorities should not be consulted as to whether their insane shall be treated or not, but it should be assumed that that is a necessity, and the State, for the protection of her citizens, should see that it is properly done.

THE MASSACHUSETTS LAW TO PREVENT THE ADULTERATION OF FOOD AND DRUGS.

THE Massachusetts Legislature of 1882, near the close of its session, enacted a law to prevent the adulteration of food and drugs, which was to take effect in ninety days after its passage, the date of its approval being May 26, 1882. The execution of this act was placed in charge of the State Board of Health, Lunacy, and Charity, which was empowered to appoint the necessary officers provided for in the statute.

At a meeting of the Board September 2, 1882, analysts were appointed to make the required inspection and analyses of food and drugs in Massachusetts.

Scarcely six months had elapsed, however, before the Public Health Committee of the present Legislature offered to the House a new bill relating to the same subject, the animus of which is a virtual repeal of the original act of last year, and the substitution of a system of local inspections in its place in all cities and towns of more than two thousand inhabitants. It will thus be seen that should the new bill be passed a fair trial of the original law will not have been made, a year not having elapsed since its passage, and hence no annual report of its operation can have been received.

We are enabled to state, however, that good and efficient work has been done by the analysts. During the few months of their service thus far nearly four hundred samples have been inspected and analyzed, a larger amount than is reported as a whole year's work under similar acts in any of our neighboring States.

These analyses include all the important articles of food and drugs, such as butter, milk, sugar, olive oil, mustard, cream of tartar, spices, wines, syrups, etc., etc., also opium, cinchona, and their derivatives, the preparations of iron, jalap, ipecac, bromide and iodide of potassium, etc., etc.

In the State of New York last week a large sale of adulterated tea was prevented by an injunction on application of the New York State Board of Health, acting under a similar law to that of Massachusetts.

It is a significant fact that certain legislators who vehemently opposed the bill of 1882, on the ground that "it would injure their business," are now the most active in support of the new bill.

In the interest of public health and safety the speedy defeat of this new and foolish bill is desirable.

— A sanitary journal in New York remarks: "Oliver Wendell Holmes says that bad air, bad whiskey, and irregular habits keep the doctors alive. He must be mistaken. These very things have killed several doctors in this city."

A FIRE IN THE NEW BUILDING OF THE HARVARD MEDICAL SCHOOL.

WE regret to report the unfortunate injury sustained by the interior of the new building of the Harvard Medical School from fire, which broke out in the principal lecture room last Friday evening. The finishing of the interior was scarcely completed, and the building was to have been opened with appropriate exercises in two or three weeks.

Only a few weeks since we published a description of the building, from which it will be seen how complete it was in all its arrangements. It was called "fire-proof," as most new buildings are now, and had it not really been so to a considerable extent the loss from this fire would have been much greater. It seems a mistake, however, to store even a really fire-proof building with such an amount of inflammable wood as was contained in the benches and fittings of this and the anatomical lecture room. Some of this wood might certainly be replaced by iron.

It is not known whether the fire had its origin in incendiarism or in the carelessness of workmen. We understand no watchman was kept in the building at night. Several months will be required to repair the damages sustained, and the dedication has been necessarily postponed until the autumn. The loss, we believe, falls upon the insurance companies, whose rates we hope will not be raised on account of the so-called "testimony" by the "prosecution" in the Tewksbury investigation.

DISEASE OF THE OPTIC DISK FOLLOWING TYPHOID FEVER.

ATTENTION was called by Dr. Oglesby, of Leeds, in a short article in *Brain* (July, 1882), to a material diminution of vision exhibited, shortly after convalescence, by patients having suffered from typhoid fever with cerebral complication, that is, meningitis. The condition of the disk in these cases is described by him as exhibiting under the ophthalmoscope a subacute rather than an acute neuritis, in which effusion, though sufficiently pronounced to render diagnosis between health and disease a certainty, is yet of so slight a character as to deceive one not expert in the use of the instrument. Both disks, as a rule, are affected, and present a peculiar tint of redness, or rather a brown-red appearance; the contour of the disk is as a rule unaltered. The visual defect is not noticed until long after the health of the patient is restored, which may be owing to the fact that typhoid patients do not resume their ordinary occupations for some time after being pronounced convalescent. The invasion of the powers of vision, though slow, is certain. The disease of the disks grows progressively worse, and though not, as a rule, ending in atrophy, interferes sadly with the use of the eyes.

Dr. Oglesby informs us that he has never met with a case without a distinct history of meningitis. The disease is much more frequent among women than men, and especially among child-bearing women. The majority of these patients present objective symptoms indicative of acute kidney mischief, having a decided appearance of cellular dropsy of the face, with the usual pallor of such cases; albumen, however, is not found in the urine, or but very exceptionally. Some of the cases reported, in which the meningeal inflammation persisted, were accompanied by intense neuralgia and continued vomiting, and ended fatally.

Atrophy of the opticus following typhoid is known both where there have been symptoms of meningitis and apparently without such symptoms. Nothnagel supposes some of these cases to be caused by proliferation of connective tissue with subsequent shrinking, causing compression of the nerve. Such a condition as Oglesby describes we have no knowledge of. His paper seems a little vague. One who is able to diagnosticate with "certainty" an "effusion so slight as to deceive any but the most practiced in the use of the ophthalmoscope" ought to be able to describe the condition better than by saying, as the writer does, it "presented a raised surface, with a decided and easily discerned brown tint, as if some artist," etc., "a brown paint-like patch." It appears from the phrasing that Dr. Oglesby makes his diagnosis with the reversed image, not the best calculated to show minute changes.

Any results of so common a disease as typhoid fever affecting so important an organ as the eye are worthy of careful study, but this contribution, we fear, is calculated to confuse rather than to increase knowledge of the subject.

THE BRITISH MEDICAL ASSOCIATION.

WE publish elsewhere the notice of the meeting of the British Medical Association at Liverpool, July 31st, and August 1st, 2d, and 3d, with its list of officers. The British Association is peripatetic, and its meetings call into good-natured rivalry the hospitality of the various cities of the island. It is perhaps one sign of the seeming decrease in the superficial contents of the earth due to improved means of communication that it should be worth while to announce a medical meeting to take place 3000 miles away in a foreign country; but we doubt not many an American who reads this announcement will debate whether he can so shape his summer trip as to be present on the specified dates, and of those who debate the subject some, certainly, will succeed in attending the meeting.

The list of officers includes a number of men of more than insular reputation, and we dare predict not only a pleasant and enjoyable but also an instructive meeting.

MEDICAL NOTES.

— The late Professor Friedreich is reported, in Virchow's *Archiv*, as having published a paper shortly before his death in which he set forth cauterization of the clitoris by means of nitrate of silver as a useful treatment in many cases of obstinate and severe hysterical affections. He advises that the cauterization be deep, as a superficial one may aggravate the disease. Among the cases which he gives as cured with

extreme rapidity by this method are one of paraplegia, which had lasted for a year and a half; hysterical aphonia, lasting for two years; glossoplegia, lasting for four months; tonic spasm of the spinal accessory, lasting for seven months; and several cases of general severe hysterical convulsions.

— Dr. Robert Kirk, of Glasgow, claims priority as to the best method of using a picric acid test for albumen in the urine lately advocated by Dr. George Johnson, of London.

NEW YORK.

— The report of the Bureau of Vital Statistics for the first quarter of the year, submitted to the Board of Health at its last meeting, showed that the number of deaths was 8538 against 10,298 in the corresponding period of 1882, classified as follows: —

	1883	1882
Sporadic diseases	1646	3452
Constitutional diseases	2018	1947
Local diseases	4049	4042
Developmental diseases	606	564
Deaths by violence	264	283

From the principal contagious diseases the deaths were as follows: —

	1883	1882.
Small-pox	8	177
Measles	191	404
Scarlatina	239	1141
Diphtheria	279	562
Whooping-cough	92	152

There has been, therefore, a very marked falling off in the prevalence of zymotic affections. Of the whole number of deaths 4378 were in tenement houses; 249 persons died from accident or negligence, 69 from surgical operations, and two at an age of more than a hundred years — Bernard Doran, an Irishman, being one hundred and ten, and Fanny Seaman, a negress, one hundred and four; 32 persons committed suicide, 26 men and six women. The number of births recorded was 7303 against 7294 in the first quarter of 1882.

— The second annual meeting of the Charity Organization of the City of New York was held on the 30th of April, with the President, Dr. S. O. Vanderpoel, in the chair, when addresses were made by the Rev. Dr. Henry C. Potter, the Rev. Charles S. Ames, of Philadelphia, and Mr. Francis Wayland, of New Haven. The report showed that since the organization of the Society, February 8, 1882, it has procured relief from churches or societies for 340 persons; from the Department of Public Charities and Correction for 150 persons; and from private families for 111 persons. It has aided by loans on securities 51, secured permanent regular work for 113, and temporary work for 105 persons. The cases treated are thus summarized: "Worthy of continuous relief, 149; worthy of temporary relief, 262; needed work rather than relief, 420; unworthy of relief, including 92 frauds exposed, 199; total, 1030."

— At the quarterly meeting of the State Board of Health held at Albany May 9th Dr. G. M. Moore, of Rochester, was elected president, and Dr. Elisha Harris, of New York, secretary. The President reappointed all the committees of last year.

— At a meeting, May 9th, of the citizens' committee of sixty, appointed at the mass meeting which was recently held at Chickering Hall in regard to the new Croton aqueduct, it was resolved that a sub committee of ten should take the whole subject of the bill recently passed by the Legislature, but not yet signed by the Governor, into consideration, and report the result of their investigation to a subsequent meeting of the general committee. To this committee of investigation Judge Arnoux, chairman of the latter, was added.

— All those having the best sanitary interests of the city at heart, as well as a multitude of warm personal friends, have learned with great regret that the reappointment by the mayor of Professor Chandler, so long the efficient president of the New York Board of Health, was rejected by the Board of Aldermen at its last meeting.

Miscellany.

SURGEON-GENERAL BARNES.

We cut the following from the official notice from the Surgeon-General's Office: —

On March 13, 1865, he was appointed Major-General by brevet for faithful and meritorious services during the war. On June 30, 1882, after over forty-three years of continuous service, he was placed upon the retired list by operation of law. The active service of General Barnes in the field and on the frontier was unusually extensive and varied; his record in this respect comparing favorably with that of any medical officer of the army. His first military duty in Florida during the disastrous Seminole war brought him face to face with the difficulties, hardships, and dangers of Indian warfare amid the deadly swamps and everglades of that inhospitable region. In the war with Mexico his field service dates from the first movements of the "Army of Occupation," and ends with the final triumph — the capture of the City of Mexico. Throughout these campaigns he was conspicuous for his close attention to duty, while his coolness in danger, his professional skill and sound judgment commanded for him the respect, confidence, and affection of those under his charge. Early in his career his promptness, decision, and ability attracted the attention of General Twiggs, a close observer, who predicted that, should he live, he would attain the highest place of honor in his department. His army life in Texas, on the great plains, and on the Pacific coast, afforded him still wider opportunities for observation, experience, and education, the value of which his bright and observant mind was quick to understand and appreciate. This training of twenty years, under all conditions of military life, formed and disciplined his mind, matured his judgment, and proved a fitting foundation for the superstructure of his after successes. In the early days of the late war General Barnes came naturally to the front well prepared to take an active and intelligent part in the events of that period. It was at this time that he fell under the observation of Mr. Stanton, then Secretary of War, who discovered in him the qualities essential to the energetic and successful administration of the important duties of the Medical Department of the Army. Once assured of the correctness of his con-

clusions, Secretary Stanton used his powerful influence to place him at the head of the Medical Bureau, and gave him his full confidence in all matters pertaining to its administration. In the strong, life-long friendship which existed between the Secretary and General Barnes we find the source of that influence, which proved so beneficial to the welfare of the Medical Department, and which was especially exemplified in the determination of the independent status of general hospitals in time of war, and in the removal of hospital transportation, both by sea and land, from any interference from other than medical authority. How thoroughly this influence was appreciated by General Barnes may be seen in the following tribute to the Secretary in his annual report for 1866:—

"It is a matter of just pride and congratulation to the medical profession throughout the civilized world that your deep interest in the health and hygienic condition of the army, your constant vigilance and most liberal assistance in all that could in any manner conduce to the greater comfort and welfare of the sick and wounded, and your official recognition of faithful and meritorious services of officers of this department have been responded to on their part by redoubled exertions, unfailing devotion to duty, and an *esprit du corps* that secures to it professional talent of the highest order. Letters from most eminent surgeons and physicians in Europe, in acknowledgment of the publications from this office, do not express more astonishment at the magnitude of the war than admiration of the unvarying support and encouragement extended to the Medical Staff under your administration of the War Department."

In his official character he was clear-sighted, prompt, and decisive; punctiliously attentive to the duties of his office and thoroughly acquainted with the necessities of his department. Under his administration the Medical Department of the Army attained a high degree of discipline and efficiency, and may, to-day, be considered one of the best organized and best supplied of any similar department in the world. To his personal influence with Mr. Stanton we are largely indebted for the successful establishment of the Army Medical Museum, the valuable Library of the Surgeon-General's Office, the compilation of the Medical and Surgical History of the War, and for many other publications of a professional nature, which, from time to time, have been issued under his direction — works which have reflected great credit upon the Army Medical Department, and for which the medical profession of this and other civilized countries owes him a lasting debt of gratitude. The same qualities which enabled him to administer with success his own department made him equally prominent in positions of public trust: for many years he was a trustee of the Peabody Education Fund; a commissioner of the Soldiers' Home; a visitor to the Government Hospital for the Insane and to the Columbia Hospital for Women. He was also connected with equally responsible trusts of a private nature. In his profession General Barnes attained an enviable eminence as a skillful surgeon and physician. He possessed quick perception, sound judgment, and a mind fertile in expedients. His unwearying attention and kindly sympathy in the sick room won for him the confidence of his patients, which he ever after retained; especially was this the case with the soldiers of the commands with which he had served; in their devotion and remembrance he found his most satisfactory reward. His professional aid and counsel was sought at the bedside of two dying Presidents. In the case of President Lincoln the deadly bullet of the assassin left no hope for help from the surgeons' art. In the sad circumstances attending the illness and death of President Garfield he was one of the number of distinguished surgeons who, through the long weeks of that protracted and painful case, faithfully, assiduously, and anxiously watched and nursed the sufferer, leaving untried no efforts to avert the fate which from the first seemed inevitable. In the case of Secretary Seward, one of the intended victims in the scheme of assassination of 1865, he had, as consulting surgeon, the happiness of seeing him restored to health and years of usefulness through skillful and prudent treatment. In the autumn of 1881, previous to his retirement from active service, his health gave evidences of failure, undoubtedly due to protracted care, anxiety, and confinement during the illness of President Garfield, but it was not until after his retirement that the chronic renal disease which resulted in his death became apparent. He was buried in Oak-Hill Cemetery, Georgetown, D. C., April 7, 1883, with the military honors befitting his rank.

BRITISH MEDICAL ASSOCIATION.

THE Fifty-first Annual Meeting will be held at Liverpool, on Tuesday, Wednesday, Thursday, and Friday, July 31, August 1, 2, and 3, 1883.

OFFICERS OF THE ASSOCIATION.

PRESIDENT, William Strange, M. D., Senior Physician to the General Infirmary, Worcester. PRESIDENT-ELECT, A. T. H. Waters, M. D., F. R. C. P., Physician to the Royal Infirmary, and Professor of Medicine in University College, Liverpool. PRESIDENT OF THE COUNCIL, C. G. Wheelhouse, F. R. C. S., Senior Surgeon to the General Infirmary, Leeds. TREASURER, W. F. Wade, F. R. C. P., Physician to the General Hospital, Birmingham. EDITOR of the *British Medical Journal*, Ernest Hart, Esq., London. GENERAL SECRETARY, Francis Fowke, Esq., 161A Strand, London, W. C.

READERS OF ADDRESSES.

SURGERY. Reginald Harrison, F. R. C. S., Surgeon to the Royal Infirmary, Liverpool.

PATHOLOGY. C. Creighton, M. D., formerly Demonstrator of Anatomy, University, Cambridge.

OFFICERS OF SECTIONS.

MEDICINE. President, John Cameron, M. D. Vice-Presidents, Thomas R. Glynn, M. D.; Frederick T. Roberts, M. D. Secretaries, Richard Caton, M. D., 18A Abercromby Square, Liverpool; Byrom Bramwell, M. D., 23 Drumsheugh Gardens, Edinburgh.

SURGERY. President, Edward R. Bickersteth, F. R. C. S. Vice-Presidents, W. Hargreaves Manifold, M. R. C. S.; W. Mitchell Banks, F. R. C. S. Secretaries, Rushton Parker, M. B., F. R. C. S., 61 Rodney Street, Liverpool; Edmund Owen, M. B., F. R. C. S., 49 Seymour Street, Portman Square, W.

OBSTETRIC MEDICINE. President, W. M. Graily Hewitt, M. D. Vice-Presidents, John Wallace, M. D.; David Lloyd Roberts, M. D. Secretaries, John E. Burton, L. R. C. P., 64 Rodney Street, Liverpool; W. C. Grigg, M. D., 6 Curzon Street, Mayfair, W.

PUBLIC MEDICINE. President, T. P. Teale, M. B., F. R. C. S. Vice-Presidents, William Carter, M. D.; W. Honner Fitzpatrick, M. D. Secretaries, F. Pollard, M. D., 52 Rodney Street, Liverpool; George Goldie, M. D., 123 Hyde Park Road, Leeds.

ANATOMY AND PHYSIOLOGY. President, Prof. E. A. Schäfer, F. R. S. Vice-Presidents, William Stirling, M. D.; Richard Norris, M. D. Secretaries, James Barr, M. D., 1 St. Domingo Grove, Everton, Liverpool; A. W. Mayo Robson, F. R. C. S., Hillary Place, Leeds.

PATHOLOGY. President, T. H. Green, M. D. Vice-Presidents, E. H. Dickinson, M. D.; Joseph Coats, M. D. Secretaries, Frank Thomas Paul, F. R. C. S., 44 Rodney Street, Liverpool; James F. Goodhart, M. D., 27 Weymouth Street, W.

PSYCHOLOGY. President, T. L. Rogers, M. D. Vice-Presidents, G. H. Savage, M. D.; D. Yellowlees, M. D. Secretaries, G. E. Shuttleworth, M. D., Royal Albert Asylum, Lancaster; W. Julius Mickle, M. D., Grove Hall Asylum, Bow, E.

OPHTHALMOLOGY. President, T. Shadford Walker, M. R. C. S. Vice-Presidents, E. Nettleship, F. R. C. S.; C. E. Fitzgerald, M. D. Secretaries, E. A. Browne, M. R. C. S., 86 Bedford

Street, Liverpool; C. E. Glascott, M. D., 23 St. John Street, Manchester.

DISEASES OF CHILDREN. President, Samuel Jones Gee, M. D. Vice-Presidents, M. G. B. Oxley, M. D.; T. R. Jessop, F. R. C. S. Secretaries, H. G. Rawdon, M. D., 42 Rodney Street, Liverpool; H. Ashby, M. D., 13 St. John Street, Manchester.

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REPORTED MORTALITY FOR THE WEEK ENDING MAY 5, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Small-Pox.
New York	1,206,590	703	276	18.74	19.92	4.26	4.40	.28
Philadelphia	846,984	388	144	16.25	11.09	8.26	3.77	1.29
Brooklyn	566,689	243	90	14.01	18.95	5.76	4 94	—
Chicago	503,304	200	86	18.50	12.00	8.50	3.00	—
Boston	362,535	176	48	15.12	20.16	6.72	—	—
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	156	51	19.84	8.32	4.48	3.84	3.85
Cincinnati	255,708	103	47	19.40	14.55	2.81	2.81	—
New Orleans	216,140	119	29	38.49	7.69	—	—	29.08
District of Columbia	177,638	92	31	13.03	15.20	3 25	3.25	—
Pittsburg (1883)	175,000	65	20	16.94	21.54	4.62	4.62	1.54
Buffalo	155,137	80	32	20.00	21.25	3.75	5.00	—
Milwaukee	115,578	53	27	19.68	16.92	9.40	5.64	—
Providence (1883)	116,755	42	13	16.66	7.14	2.38	2.38	—
New Haven (1883)	73,000	20	3	10.00	20.00	—	5.00	—
Charleston	49,999	26	8	—	3.85	—	—	—
Nashville	43,461	32	14	12.50	15.62	—	3.13	6.25
Lowell	59,485	21	4	14.28	9.52	4.76	4.76	—
Worcester	58,295	19	6	15.78	26.30	5.26	5.26	—
Cambridge	52,740	—	—	—	—	—	—	—
Fall River	49,006	25	10	8.00	—	4.00	—	—
Lawrence	39,178	9	3	11.11	—	—	—	—
Lynn	38,284	15	1	—	13.33	—	—	—
Springfield	33,340	8	1	25.00	25.00	12.50	—	—
Salem	27,598	21	7	19.04	—	—	4.76	—
New Bedford	26,875	9	4	—	—	—	—	—
Somerville	24,985	11	1	—	—	—	—	—
Holyoke	21,851	11	3	27.27	9.09	9.09	—	9.09
Chelsea	21,785	2	0	—	—	—	—	—
Taunton	21,213	6	2	—	—	—	—	—
Gloucester	19,329	8	2	12.50	25.00	—	—	—
Haverhill	18,475	—	—	—	—	—	—	—
Newton	16,995	5	1	—	20.00	—	—	—
Brockton	13,608	—	—	—	—	—	—	—
Newburyport	13,537	12	4	16.66	—	—	8.33	—
Fitchburg	12,405	4	0	—	25.00	—	—	—
Malden	12,017	—	—	—	—	—	—	—
Twenty Massachusetts towns	143,453	56	14	7.14	17.86	3.57	—	—

Deaths reported 2740 (no report from St. Louis): under five years of age 982: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 480, consumption 442, lung diseases 427, diphtheria and croup 137, scarlet fever 93, small-pox 51, diarrhœal diseases 44, measles 37, whooping-cough 25, malarial fevers 25, typhoid fever 23, cerebro-spinal meningitis 21, erysipelas 13, puerperal fever 10, typhus fever one. From *diarrhœal diseases*, New York 16, Boston six, District of Columbia five, Chicago, Baltimore, and Cincinnati three each, New Orleans two, Milwaukee, Providence, New Haven, Lawrence, and Salem one each. From *measles*, New York 22, Boston seven, Cincinnati, three, Chicago two, Philadelphia, Baltimore, and Salem one each. From *whooping-cough*, New York and Cincinnati six each, Pittsburg four, Brooklyn and Buffalo two each, Philadelphia, Chicago, New Orleans, District of Columbia, and Springfield one each. From *malarial fevers*, New York nine, New Orleans seven, Brooklyn four, Chicago three, Baltimore two. From *typhoid fever*, New York six, Chicago and Providence four each, Philadelphia three, Buffalo two, Baltimore, Nashville, Lowell, and Chicopee one each. From *cerebro-spinal meningitis*, New York five, Philadelphia and Baltimore three each, Buffalo and Milwaukee two each, Chicago, Worcester, Fall River, Salem, Holyoke, and Gardner one each. From *erysipelas*, New York four, Philadelphia three, Baltimore and Cincinnati two each, New Orleans and Gloucester one each. From *puerperal fever*, Pittsburg and Buffalo three each, Boston two, Brooklyn and Newburyport one each. From *typhus fever*, New York one.

Thirteen cases of small-pox were reported in Baltimore, Buffalo eight, Pittsburg one, Milwaukee one; diphtheria 25, scarlet fever 17, typhoid fever four, and typhus fever two, in Boston; diphtheria seven and scarlet fever 30 in Milwaukee.

In 34 cities and towns of Massachusetts, with an estimated population of 1,010,853 (estimated population of the State 1,922,530), the total death-rate for the week was 20.11 against 19.57 and 22.78, for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending April 21st, the death-rate was 23. Deaths reported 3807: acute diseases of the respiratory organs (London) 474, whooping-cough 101, measles 65, scarlet fever 61, fever 55, diarrhœa 34, diphtheria 29, small-pox (London and Wolverhampton two each, Leeds and Newcastle one each) six. The death-rates ranged from 16.3 in Bradford to 30.8 in Blackburn; Sheffield 18.5; Leicester 20.5; Sunderland 22; London 23.2; Newcastle-on-Tyne 25.1; Liverpool 25.4; Oldham 27.2; Wolverhampton 29.6. In Edinburgh 20.1; Glasgow 33.9; Dublin 37.2.

For the week ending April 14th, in 172 German cities and towns, with an estimated population of 8,697,774, the death-rate

was 27.7. Deaths reported 4637; under five years of age, 2012; lung diseases 731, consumption 707, diphtheria and croup 159, diarrhœal diseases 159, whooping-cough 57, measles and rötheln 75, scarlet fever 54, typhoid fever 48, puerperal fever 27, small-pox (Breslau three, Heilbronn, and Wiesbaden one each) five, typhus fever (Braunschweig one) one. The death-rates ranged from 16.7 in Wiesbaden to 49 in Würzburg; Königsberg 34.9; Breslau 35; Munich 31; Dresden 27.2; Berlin 27.9; Leipzig 23.7; Hamburg 28.3; Cologne 30.1; Frankfort 22.9; Strasburg 32.5.

The meteorological record for the week ending May 5th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date. April–May, 1883.	Barometer. Daily Mean.	Thermometer. Daily Mean.	Thermometer. Maximum.	Thermometer. Minimum.	Relative Humidity. 7.23 A. M.	Relative Humidity. 3.23 P. M.	Relative Humidity. 11.23 P. M.	Relative Humidity. Daily Mean.	Direction of Wind. 7.23 A. M.	Direction of Wind. 3.23 P. M.	Direction of Wind. 11.23 P. M.	Velocity of Wind. 7.23 A. M.	Velocity of Wind. 3.23 P. M.	Velocity of Wind. 11.23 P. M.	State of Weather.[1] 7.23 A. M.	State of Weather.[1] 3.23 P. M.	State of Weather.[1] 11.23 P. M.	Rainfall. Duration. Hrs. & Min.	Rainfall. Amount in inches.
Sun., 29	29.898	38	49	35	65	82	89	79	N	E	NW	8	10	5	O	O	C	—	—
Mon., 30	30.129	48	59	33	54	32	63	50	NW	W	W	9	9	3	C	F	C	—	—
Tues., 1	30.404	51	64	37	56	35	60	50	W	S	S	1	10	14	C	C	C	—	—
Wed., 2	30.325	67	52	42	60	86	93	80	SE	E	SE	6	20	2	C	C	F	—	—
Thurs., 3	30.075	54	61	45	100	80	93	91	SW	E	SW	1	10	4	G	C	O	—	—
Fri., 4	30.230	46	62	43	93	86	100	93	NE	E	NE	12	13	6	O	O	G	—	—
Sat., 5	30.260	44	47	39	93	83	100	92	NE	E	NE	19	15	6	O	O	R	—	—
Means, the week.	30.189	49	64	33				76										12.30	.16

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., snow; R., rain; T., threatening; B., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MAY 4, 1883, TO MAY 11, 1883.

BAILY, JOSEPH C., major and surgeon. To be relieved from duty in the Department of California, and assigned to duty in the Department of Texas. Paragraph 12, S. O. 102, A. G. O., May 3, 1883.

BILLINGS, JOHN S., major and surgeon. By direction of the Secretary of War to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held at Cleveland, Ohio, June 5, 1883. Paragraph 10, S. O. 105, A. G. O., May 7, 1883.

SPENCER, WILLIAM G., captain and assistant surgeon. Now awaiting orders, assigned to duty in the Department of the East. Paragraph 12, S. O. 102, A. G. O., May 3, 1883.

AMERICAN MEDICAL ASSOCIATION.

REDUCTION IN FARE.

THE Committee of Arrangements announce as follows: Lake Shore & Michigan Southern, Buffalo & Chicago and all branches, New York, St. Louis, & Chicago, Nickel Plate, Cleveland, Columbus, Cincinnati, & Indianapolis Railway, and Indianapolis & St. Louis, New York, Pennsylvania, & Ohio Railroad, Wabash, St. Louis, & Pacific, Ohio & Mississippi Railway, Cincinnati, New Orleans, & Texas Pacific, Cincinnati Southern, Louisville & Nashville Railroad, Cleveland & Pittsburg Railroad, Cleveland, Tuscarawa Valley, & Wheeling Railroad, Valley Railroad, Connotton Valley Railroad carry to Cleveland for one full fare, and return at one cent a mile on certificate of Y. C. Scott, M. D., Chairman of Committee of Arrangements, showing attendance at the meeting of the Association. Lines west of Chicago and Eastern Trunk lines refuse any reduction for *all* going to the session in June.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

THE Fifth Annual Congress of the American Laryngological Association will be held at the Hall of the Academy of Medicine, 12 West Thirty-First Street, New York, May 21, 22, and 23, 1883.

May 21st. Morning session at ten o'clock. Address of Welcome by the President.

Papers: (1.) New Facts in Laryngology, by George M. Lefferts, M. D., New York. (2.) A Common Form of Vocal Disability resulting from Pathological Processes. The Phenomena used to Demonstrate the Falsity of one System of Voice Training, by S. W. Langmaid, M. D., Boston.

Afternoon session at three o'clock. (3.) The Destruction of Nasal Polypi by Chromic Acid, by Frank Donaldson, M. D., Baltimore. (4.) Chorea Laryngis, by Frederick I. Knight, M. D., Boston. (5.) The Treatment of Laryngeal Phthisis, by E. Fletcher Ingals, M. D., Chicago. (6.) The Healing of Ulcers in Laryngeal Phthisis, by William C. Jarvis, M. D., New York. (7.) Paresis of the Constrictor Muscles of the Pharynx simulating Spasmodic Stricture of the Œsophagus, with Report of Cases, by Frank H. Bosworth, M. D., New York.

Adjournment at 5.30 P. M.

Evening. Annual dinner of the Association at Delmonico's at seven o'clock.

May 22d. Morning session at ten o'clock promptly. Business meeting.

At eleven o'clock the reading of papers. (8.) On Photographing the Larynx, by Thomas R. French, M. D. Brooklyn. (9.) Congenital Tumors of the Larynx, with a report of cases, by H. A. Johnson, M. D., Chicago. (10.) Laryngeal Paralysis from Aneurism, by William Porter, M. D., St. Louis.

Afternoon session at three o'clock. (11.) Reflex Phenomena due to Nasal Disease, by Louis Elsberg, M. D., New York. (12.) Smell, Hygienically and Medico-Legally Considered, by Clinton Wagner, M. D., New York. (13.) Asymmetry of the Nasal Chambers, by Harrison Allen, M. D., Philadelphia. (14.) On the Results of the Treatment of Naso-Pharyngeal Polypi, with Demonstration of Successful Cases, by Rufus P. Lincoln, M. D., New York.

Evening. Theatre party (Wallack's) and supper (Delmonico's) given by the President.

May 23d. Morning session at ten o'clock. (15.) A Case of Thyrotomy for Morbid Growth, with Subsequent Development of Epithelioma in the Cutaneous Cicatrix, but without Involvement of the Interior of the Larynx, by J. Solis-Cohen, M. D., Philadelphia. (16.) Experimental Researches on the Tension of the Vocal Bands, by F. H. Hooper, M. D., Boston. (17.) Aural Complications of Inflammatory Conditions of the Nose and Throat, by Beverley Robinson, M. D., New York. (18.) The "Lacunæ Tonsillaris," by D. Bryson Delavan, M. D., New York.

Afternoon session at three o'clock. (19.) The Value of Post-Laryngeal Papillomata as a Means of Diagnosis in Tubercular Disease, by George W. Major, M. D., Montreal, Canada. (20.) A Case of Enormous Tumor, removed from the Glosso-Epiglottic Sinus, with Remarks, by E. C. Morgan, M. D., Washington, D. C. (21.) A Case of Sudden Death occurring after Tracheotomy, with Remarks, by Morris J. Asch, M. D., New York. (22.) On Adhesion of the Velum to the Walls of the Pharynx, by Andrew H. Smith, M. D., New York.

Ballot for officers, 1883–84, and their induction into office.

Adjournment. D. BRYSON DELAVAN, *Secretary.*

Original Articles.

CONSUMPTION IN NEW ENGLAND.

BY E. P. HURD M. D.,
Chairman Board of Health, Newburyport, Mass.

III.

TREATMENT.

The treatment of the first or deposition stage of phthisis involves the question of curability. Practically we have only to consider this question in connection with the earlier periods of this disease, before ulceration has much progressed and cavities have formed.[1] That phthisis in the first stage has often been cured there can be no doubt; such cases are witnessed not so much as a result of the administration of certain medicaments (as cod-liver oil and preparations of the hypophosphites) as of an intelligent avoidance of the causes which produced the disease. The patient, if previously underfed, is now given an abundance of nourishing food; if living in confined air he is made to spend much of his time outdoors in a pure, dry, bracing atmosphere; if formerly addicted to faulty habits of hygiene those habits are corrected. In fact ætiology must guide the treatment which is designed to be curative. Bouchardat is right in insisting that an appreciative study of causes must be made the basis of all rational therapeutics.[2] Octave Sturges, in a recent lecture in the *Lancet*, on the Curability of Tuberculosis, pertinently asks, "Is there no therapeutical teaching in the fact that the tuberculous children of the poor develop tuberculosis as the rabbits do, by living in impure air and damp underground apartments, or in the fact that a youth of tuberculous family will escape the fate of his brothers and sisters, and the fate that over and over again has threatened himself, by removing to some better country?"[3]

One of the most signal instances that I have ever seen of the curability of phthisis in the first stage, is that of Mr. W. B., a well-known young gentleman of this city. He was taken with pulmonary hæmorrhage January 12, 1882; amount raised, over sixteen fluid ounces. This was followed by repeated hæmorrhages, once, twice, occasionally three times a week for several months. There was a remittent pyrexia, the thermometer for days indicating a temperature of 101° F. to 103° F., then falling to the normal till another period of pulmonary congestion and hæmorrhage ensued. Cough was very obstinate and persistent, with expectoration of glairy mucosity, often mixed with bloody matter. There were severe night sweats except when controlled by atropine, quinine, etc. The patient considerably emaciated, and the physical signs revealed extensive dullness at the left apex, with harsh blowing breathing. He was much debilitated, but the digestive functions were in a fair condition. He shortly commenced taking cod-liver oil and porter, of the latter a bottle a day. The oil was well borne, even in large doses; sometimes he would suspend it for a few days, and take between meals a tablespoonful of extract of malt. Early in the summer he was induced to visit some friends in the western part of New Hampshire, where he spent most of the season, being much of the time outdoors. He came home cured of his cough and hæmorrhages, strong and hearty, and has since remained free from pulmonary troubles.

The above was clearly a case of acquired phthisis, of the pneumonic form, brought on by intemperance and exposure. If a bottle of porter a day was prescribed for one who had been addicted to alcoholic excesses, and was broken down in consequence, it was with the feeling that in the present depressed state of the vital forces some alcoholic stimulus was still necessary, and that porter was the least objectionable form. I must add that there is no tuberculous history in this family.

According to Jaccoud (and my own experience confirms his conclusions) hereditary phthisis is the least amenable to treatment, though prophylaxis may do much to postpone if not to prevent the manifestations of the disease. Nor is *innate* phthisis — the result of debilitating habits or vices on the part of the parents, with consequent enfeeblement of the children's organisms — much more curable than the preceding. Acquired phthisis, whether engendered by debilitating influences or diathetic conditions, as scrofula, syphilis, is curable. The pneumonic forms of phthisis,[4] moreover, are more curable than the distinctively tuberculous.[5]

There is a variety of phthisis occasionally met with. I have seen three or four well marked cases. It is known as fibroid phthisis; is almost always a-febrile, though attended with obstinate cough and muco-purulent expectoration. In one case which I witnessed there was initial hæmoptysis. It is as a rule unilateral. The anatomo-pathological characteristic is infiltration of the cellular tissue and alveolar interspaces with a fibro-plastic material whose induration causes shrinkage of the pulmonary substance with eventually extreme contraction of the lung and displacement of organs. This form of phthisis is incurable.

The following observation, selected from my notebook, is evidently an example of innate phthisis. At the time that this young man was born the maternal organism was enfeebled by toil, hardship, and privation, the father was a drunkard, and a vulnerable constitution was given to the offspring. I do not look upon this patient as curable, but there may be amelioration during the summer months.

PHTHISIS IN THE STAGE OF DEPOSITION. ACCUMULATION OF CRUDE TUBERCLES AT THE APICES, WITH INDURATION OF INTERVENING TISSUE.

John H., is of Irish parentage, aged twenty. No tuberculous history on the part of ancestry. Father

[1] With a view of determining the occurrence of spontaneous cure in pulmonary phthisis, Dr. Heitler, of Vienna, has carefully examined 16,252 cadavers. He found in 780 who had died of other diseases cicatrices resulting from the healing of caseous foci. One of these had attained the age of one hundred and one, another of one hundred and three years. All belonged to the working classes. The lesions consisted of deeply pigmented cicatricial indurations. He found remnants of cavities of various sizes, from that of a hazel-nut to that of a hen's egg. Their most frequent situation was at the apex. The author maintains that cicatrization is more likely to occur in chronic than in acute cases, and only as long as the tubercular deposits are confined to the upper lobes. (New York Medical Record, April 23, 1881.)

Notwithstanding the results of autopsies, showing the cicatrization of cavities, I believe that physicians in New England will agree with me that in their experience such cicatrizations are very rare.

[2] Bull. Gén. de Thérapeutique, April 15, 1883.

[3] London Lancet, American reprint, December, 1882.

[4] This is in accord with the experience of Dr. Andrew Clarke. (Vide Lecture on Phthisis, delivered in Bellevue Hospital Medical College, December 10, 1878.) The usual rule of tuberculous phthisis is death. It is in cases of pneumonic phthisis that the greatest number of recoveries take place, and this either by fibroid thickening and hardening or by fatty degeneration and absorption of the caseous pneumonic exudation.

[5] Jaccoud. Curabilité et Traitement de la Phthisie Pulmonaire. Paris, 1881.

born in Ireland, is a robust day laborer, but has always been intemperate, and has occasionally been for weeks disabled for work in consequence of some drunken debauch. Mother also born in Ireland, died of chronic pneumonic phthisis one year ago. I attended her during her sickness. Her disease was attributable to overwork, insufficient alimentation, the exhaustion of repeated child-bearing, and the care of her large family. The average earnings of this family, eight in number, did not exceed a dollar a day, and the habitation in which they lived was low, damp, and ill ventilated.

The present patient was always a delicate boy. Was as well as usual, and able to pursue his tasks as picker in the mills, till February 15th, when he took cold, and a bronchial catarrh set in with quite a severe cough. This cough has persisted to the present time, is very troublesome, and is attended with abundant expectoration of frothy mucus.[1] The pulse is frequent (100) and feeble; matinal temperature normal; evening temperature 100° F.; night sweats; appetite and digestion are impaired, and he has somewhat emaciated.

Physical signs. Some flattening of the clavicular regions. Percussion dullness under the clavicle on both sides in front, very marked in left pectoro-deltoidean hollow, one of the favorite sites of commencing tuberculous deposition.[2] Respiration weak, but harsh on the left side, exaggerated, and slightly blowing on the right. The crepitant râles of accompanying bronchitis. Heart sounds abnormally distinct on both sides.

I take it that we have here enough facts to justify the diagnosis of pulmonary tuberculosis in the first or precavernous stage.

What shall we do for this young man? First of all, can anything be done to save him from the fatal progress of this wasting malady?

If he must still remain at home, and occupy that dingy, ill-lighted, and often insufficiently ventilated apartment, a negative answer must be given. My decided conviction is that whatever may be done the disease cannot be arrested. Possibly a change of climate might postpone the fatal issue. If he could be sent to some clear, cool, dry climate like Colorado or New Mexico he might for a time improve. The climate of New Mexico, according to recent interesting articles by Dr. Tyndale, in this journal, is the ideal region for all cases of phthisis with slowly progressive destruction and infiltration, possessing all the qualities of a good aseptic climate, dryness, a moderately warm atmosphere, preponderance of clear, sunshiny days.[3]

But where is the money coming from that shall enable this patient to perform so long a journey? This is a problem of which there is no practical solution. Shall he follow Dr. Oswald's advice,[4] and take his pack on his back, and start on foot for an overland journey to California? This would require a great amount of physical and mental energy, which I fear that our patient does not possess; some cash in pocket is also desirable.

[1] The sputum of this patient, stained with aniline and vesuvine blue, and otherwise treated according to the method of Ehrlich and Gibbes (and here I have to acknowledge the assistance of my friend, Dr. J. G. Hays, of Ipswich), revealed a considerable number of tubercle bacilli. I am daily finding the bacillus test of phthisis of great diagnostic value.

[2] It is especially the supra-clavicular and clavicular regions and the pectoro-deltoidean hollow which furnish the first signs of tubercle. Gueneau de Mussy. Clinique Médicale, t. i., p. 436.

[3] Boston Medical and Surgical Journal, March 22 and April 5, 1883.

[4] Popular Science Monthly, May, 1883.

On the whole I have decided as the most feasible measure that presents itself now, to send him a few miles into the country to remain with a cousin, on a farm, during the summer months. To be out-of-doors as much of the time as possible. To do chores and all the farm work that his strength will permit. To take all the cod-liver oil that his stomach will bear. He may rally somewhat, but when the cold weather of fall comes he will rapidly decline.

The therapeutics of consumption may be considered under two heads, namely, the hygienic and the pharmaceutical treatment of the disease.

The first division includes the following subdivisions: (1) climate; (2) alimentation; (3) exercise; (4) moral conditions; (5) hydrotherapy.

(1.) Respecting climate it may truly be said that if a cool, dry, equable climate be the ideal climate for consumptives, New England hardly satisfies the requirement, except at exceptional periods. During the summer months we languish under an almost tropical heat, the thermometer often standing for a succession of days in the shade between 90° and 98° F. From the month of April to the month of November there is an average daily range of temperature of 22° F. The average daily range for the winter months is a trifle less. It is not an uncommon event for the record of one day in the spring or fall months to show a difference of 45° F. between the maximum and minimum temperature. Our winters are long and severe; the mean temperature for six months, November to April inclusive, is 33° F.; the lowest temperature in December, January, and February being —5° F.[5]

With regard to the "ethereal mildness" of springtime, it is all a poetic fancy. Spring is with us the very worst season of the year, by far the most fruitful in pulmonary diseases.

As concerns humidity, meteorological observations show that the amount of moisture present in the atmosphere is very variable, being dependent on the temperature and direction of the wind. For this section of New England the easterly and southerly winds, sweeping over a large area of water, bring us more moisture than the westerly and northwesterly. Our north and northeast winds are accompanied with a high degree of relative humidity, seventy-eight to eighty-four per cent. of the quantity of moisture necessary to saturate the atmosphere. The sultry air of July and August, known as "dog-day weather," is produced by a high temperature (80° to 90° F.) with a high percentage of humidity. So with respect to the chilly air frequent in winter and spring, against which hardly any clothing seems to offer protection. A very high relative humidity is the cause of this state of the weather, but combined with a low temperature (20° to 35° F.). And this is the season for colds, coughs, and bronchial affections.[6] But if we have not the ideal climate for consumptives, it is easy for us to command, without excessively long journeys, any range of temperature or humidity that we please, from Labrador peninsula on the north to the coasts of Florida on the south, and from the pine forests of Nassau to the great western highlands.

[5] Meteorological Report, Newburyport Board of Health, 1880, 1881, 1882.

[6] Dr. Gleitsmann, of Baltimore, has collected from various sources tables showing the relative mortality according to months, seasons, sex, age, locality, etc. The percentage of deaths in the spring months is shown to be larger than in the other seasons, and this is accounted for by the humidity of the atmosphere and the frequent thaws and rains.

There is hardly any subject on which so much has been written the last fifty years as the influence of climate on pulmonary affections, and especially phthisis. Fifty-three years ago Dr. J. C. Warren communicated to the *American Journal of Medical Sciences* (1830, page 260) quite an elaborate article on the Climate of Florida, showing that in respect to uniformity of temperature, humidity, predominance of clear, sunshiny days, the possession of a bracing atmosphere, etc., Florida offers a very favorable climate for consumptives. Since then multitudes have gone to Florida for recuperation, in all stages of the disease, some only to find the atmosphere "damp" and "malarious," to be annoyed by chilly winds, and to come home worse than they went, or even to die there; others to obtain speedy amelioration and restoration.[1] But other localities present urgent claims as sanitaria: The mountain regions of North Carolina, with Asheville as their centre; Savannah, Georgia, and the pine forests of that State; especially Aiken, South Carolina.[2] We hear from various sources the Adirondacks praised in high terms as *par excellence* the sanitarium for incipient consumptives. Colorado and New Mexico present, perhaps, the strongest claims on our attention.

Amid the multiplicity of sanitaria and all the good things that are said severally in their favor, it might be hard to decide upon the best locality to send our consumptive patients did not a few general principles guide us. These I shall briefly summarize: —

(1.) That health resort is the best which will afford the patient an opportunity to spend the most of his time in the open air, and will insure him a good appetite, so that he can eat an abundance of nourishing food. The latter is of special importance. What climate will give him a keen appetite so that he can eat well and digest well?

(2.) Common experience testifies that the climate of elevated regions is more tonic and bracing than the climate of plains, thus promoting appetite and nutrition and staying the march of disease. Dr. Kneeland[3] states that consumption is unknown in the mountainous regions of Lake Superior.

It appears certain, according to the researches of Jourdanet, that at certain altitudes phthisis is so rare as to be almost unknown; his line, which excludes phthisis, being drawn at about six thousand feet above the level of the sea. This writer, during an experience of four years and a half on the high table lands of Mexico, where he practiced medicine and made more than thirty thousand visits, never saw but six cases of phthisis. Toner has given us similar facts with regard to almost all the mountainous regions of the New World.[4] But here a caution is necessary. These elevated regions are attended with almost constant cold weather, and cold promotes pulmonary congestions. The patient, then, should have fair vital resistance, or he may be made worse by the change to a high altitude. If, moreover, the disease has made much progress he will almost certainly derive injury from the change; this is especially the case if he have any acute affection of the lungs or any disease of the heart.[5]

(3.) It is only in the pretubercular, or in the first stage of phthisis, and before any serious lesion of the lungs has taken place, that it is safe to recommend our patients to seek a bracing climate, or even to go any great distance from home. It is very seldom that any benefit is derived by a forced exile from the comforts of home when the disease has a fast hold of the patient.

(4.) In the active forms of phthisis, complicated with fever and hæmoptysis, mild climates with considerable atmospheric moisture are to be preferred. There are plenty of stations in the South which answer to the requirement.

(5.) Lastly, for many of our consumptives too poor to afford long journeys, we can do no better than to recommend them, if possible, to get away into the country and to change their habits of living from indoor to outdoor life. It is well ever to bear in mind, in making choice of a climate for a consumptive patient, that as a general rule that climate is the best for an invalid which is the most unlike the climate where he acquired his disease. Even this, however, must be taken with great reservation. Many of our consumptives, foreigners, have contracted their disease by breathing, habitually, the vitiated air of our factories and workshops. Others are cases of hereditary or acquired phthisis, where the patient, native to this soil, has abandoned an outdoor for an indoor life. Here a return to some open-air occupation would be likely to benefit. On the whole the formula of Celsus is the most sensible, and is open to no objection. "The worst air for a patient is that which has given rise to the disease."[6] This gives us ætiological hints sufficiently easy of application.

(2.) As regards diet in phthisis there is no subject of greater importance. Consumption being essentially a disease of malnutrition, often engendered by insufficient alimentation, — food meagre in quantity or quality, — it is evident that any attentions of ours that do not comprehend a careful supervision of the ingesta will be to little purpose.

Another point of capital importance is that when in our patients the stomach and digestion fail, we feel that all hope is gone. We have an assured conviction that when they have vigorous appetites and can, not merely hold their own, but gain in flesh and strength, their coughs and night-sweats will speedily disappear, and there will be nothing to fear from the tubercle bacillus. In fact there is not a man in the

[1] Vide Haywood's communication in the Medical Record, August 12, 1882. He condemns the climate of Florida as "debilitating." He prefers the "sea-shores of New Jersey." During his thirty-eight years of practice "he has never sent a patient to Florida with any satisfactory result." The country is subject to "northeasters," and the temperature "varies greatly from day to day." Insect life is obtrusive and harassing.

See, on the other side, Dr. Neal in the Record for September 23d. He advises a residence in the highlands of Central Florida, and cites numerous cases where amelioration was obtained, although the disease was considerably advanced. Bradner's letter in the same journal, January 14, 1882, speaks highly of Gainesville as a sanitarium for consumptives, having pure, dry air and immunity from coast winds.

See, also, F. D. Lente on the Climate of Florida as a Health Resort, Medical Record, March 3, 1877. Also Agnew on Florida in Winter, in the Record, vol. xx., p. 721.

[2] Health Resorts at the South, by Dr. William W. Morland, in the Boston Medical and Surgical Journal, July 11, 1872. Simons. Climate and its Relations to the Production, Progress, and Cure of Consumption, American Journal of Medical Sciences, January, 1872. Tyndale on the Climate of New Mexico, in the present volume of this journal.

[3] Boston Medical and Surgical Journal, January 7, 1858.

[4] Toner. Dictionary of Elevations, New York, 1864. He has established beyond contradiction that the mortality from phthisis diminishes with altitude. See, also, Dujardin-Beaumetz, Leçons de Clinique Thérapeutique, t. ii., p. 302.

[5] Denison. Influence of High Altitudes on the Progress of Phthisis. Transactions of the International Medical Congress of Philadelphia, page 287. Theodore Williams. Treatment of Phthisis by Residence in High Altitudes.

[6] Vide Kneeland's articles on Phthisis, Boston Medical and Surgical Journal, vol. lviii., January 7 and February 18, 1858.

medical profession who does not count more on keeping or restoring appetite and digestion in his phthisical patients than on all the expectorants and antiseptics and germicides in the world. Acting on this principle we avoid nauseating cough medicines, and especially opiates.

The highly cultured gentleman who from the elegant ease of his studio tells us in the *Popular Science Monthly* how consumption should be treated, gives his constituency advice as to diet which, however applicable to the overfed and lithæmic consumptives of the drawing room, is hardly pertinent to the cases with which we have to deal in New England. If, therefore, I express my faith (founded on an experience of over fifteen years in the treatment of phthisis among our laboring people) in the utility of the raw-meat cure of consumption I hope that I may not be considered by my *confrères* as behind the age.[1] Certainly, then, nothing has given more satisfactory results than a highly animalized diet in cases such as I have mentioned. If you can sufficiently early have the control of their diet, and before their appetite leaves them; if you can give them plenty of meat, raw or cooked, and eggs, and milk, and oysters, with bread and other farinaceous foods, and fruits; if, moreover, cod-liver oil can be taken, and digestion can be kept at a high mark by the aid of some alcoholic stimulant (taken with moderation), you will generally witness decided amelioration if not positive cure.

My note-book contains many striking cases of consumption, in the early stages, among French Canadians, — some of these were seen in connection with Dr. H. B. Wheewright, of the State Board of Charities, — where putting the patients on a full diet, of which fresh meat was a large component, with pure cod-liver oil (made in Newburyport), and four ounces daily of old West India rum, did wonders for them in a short time. The meat was often given in the shape of raw beef, scraped or pounded into a jelly, and mixed with a little rum or brandy. Of this sometimes three or four ounces would be ingested during the twenty-four hours. Of milk, the more taken the better; often a little rum or whiskey was added to this, and an egg was dropped into it when the stomach of the patient would bear it. Cream is an excellent dietetic adjuvant when it can be obtained Cod-liver oil is a first-class nutrient, and is always beneficial when it is well borne and does not disturb the appetite; unfortunately, however, but a small proportion of patients can take cod-liver oil long enough or in sufficient doses to do them much good. Some of the malt extracts have seemed to me of great utility. These probably act by furnishing to the absorbents a considerable quantity of easily assimilated nutriment.

For the past year or so our attention has been much directed to the wonderful results which have been claimed by a new process which the French therapeutists (Debove and Dujardin-Beaumetz) have called *gavage*, and which consists in *stuffing* consumptive patients with alimentary mixtures of meat, farinaceous powder, and eggs, which are poured by means of a funnel down a long, flexible, stomach-tube. In this way patients who have lost their appetites may be fed to the extent of a couple of quarts daily. It is most singular that this forced feeding is seldom attended with violent dyspeptic symptoms. My esteemed friend Dr. Dujardin-Beaumetz, of Hôpital St. Antoine, Paris, is enthusiastic in praise of this mode of treatment, which he claims has sometimes arrested phthisis in the earlier stages. It is undoubtedly true that the sensation of appetite is not always an index of digestive or assimilative power. There may be the ability to appropriate and profit by nutriment when the appetite is poor or absent altogether. In such cases forced feeding does wonders.

(3.) The necessity of exercise in connection with climate cure, or the change from indoor to outdoor life, has already been hinted at. It is obvious that only by perseverance in outdoor pastimes and tasks, which may be carried to the point of fatigue but should not be prolonged to exhaustion, can appetite and digestion, as well as muscular vigor, be promoted. By suitable exercise, whether in the form of gymnastics or sporting, whether as horse-back riding or even farm work, respiration is facilitated, the blood-making organs acquire greater activity, and morbid deposits are stayed or removed.

Under the head of exercise, massage is included; this is highly spoken of by foreign writers as an auxiliary to the ordinary hygienic treatment of phthisis.

(4.) The moral hygiene of phthisis includes first, all those moral influences which lead the patient to persevere in the attempt to obtain a cure of his malady; which keep him from despair. Encouraging words sometimes help far more than medicine. Lift up the despondent, point out to them a brighter future, and that very day, as Gueneau de Mussy so well remarks, "they will have a better appetite, will digest their food better, they will feel themselves lighter, nutrition and repair will go on more regularly, and if you can prolong this good result you will have done much toward a cure." [2]

The moral hygiene of consumption also comprehends the entire subjugation of all debasing passions and debilitating vices, from which, unfortunately, consumptives are not always free.[3]

(5.) Before finishing the hygienic treatment of consumption — a treatment so important, that, in the words of a recent writer, if phthisis ever disappears from society it will be by the constant progress of hygiene, — a word might profitably be said in favor of hydro-

[1] Jaccoud (Clinique Médicale, Hôpital Lariboisière) highly extols the raw-meat cure of phthisis. So, also, Fuster, of Montpellier, who recommends a mixture of raw meat and alcohol as specific in tuberculosis.

Weisse, of St. Petersburg, was the first to introduce this aliment into therapeutics. Trousseau's *Conserve de Damas* is a mixture of raw meat and gooseberry jelly, a preparation which children take with avidity. Laborde's *potage au tapioca medicinal* consists of scraped beef which has been passed through a fine strainer, mixed with cold broth till it has about the consistency of tomato soup, when tapioca gruel in equal proportions is stirred well into it. It is exceedingly palatable; the taste of the meat is well disguised.

My plan has generally been to have the meat pulp scraped out with a sharp table knife (this can be done with considerable facility, the fibre being left behind). This is then eaten as it is, or cooked a little, or taken in broth, or mixed with whiskey, as Jaccoud recommends.

[2] Noel Gueneau de Mussy, Clinique Medicale, t. i., p. 462.

[3] In Part II. syphilis was cited as one of the prolific causes of phthisis in the South; by the debilitation which it produces it has doubtless much to do with the development of tuberculosis in all our large cities. Intelligent observers believe that they have again and again traced a causal connection between excessive venery and tuberculosis, especially when there is a hereditary predisposition. Masturbation, by breaking down the constitution, certainly favors the domination of the tubercle bacillus. Speaking of marital excesses, Beaumetz (Clin. Ther., t. ii., p. 554) has these pertinent words: "Je vous ai parlé de l'ardeur des phthisiques auprès des femmes; c'est là, il faut le reconnaître, un écueil devant lequel échouera toute votre therapeutique; et lorsque vous serez parvenu, après bien des efforts, à relever ses forces, et sa nutrition, le phthisique, en quelques nuits, fera disparaître tout le résultat de votre therapeutique."

therapy, which often proves a powerful auxiliary to outdoor air and exercise. Used with due caution, much good may be expected from cold douches, and especially cold sponging. No one has insisted more on the importance of hydrotherapy in early phthisis than Professor Peter, of Paris. He begins with frictions of dry flannel, then with cloths dipped in cologne or vinegar, followed by dry rubbing for five or six minutes, and finally advances to the use of the cold sponge. These exercises should be taken at rising and retiring. Sponging is better than the douche. The patient should gradually get accustomed to the cold water applications. In cases where a change of climate is impossible, the debilitated young man or woman may, by utilizing at home the advantages of cold water, obtain considerable amelioration.

(*To be continued.*)

OTITIS MEDIA PURULENTA.[1]

BY E. D. SPEAR, M. D.

THE fact that study of the anatomy of the middle ear reveals the causes of some of the complications found in cases of purulent disease, is a sufficient apology for making reference to it.

The middle ear, so called, or that part of the auditory apparatus concerned in the transmission of sonorous vibrations, includes the tympanum, Eustachian tube, and mastoid cells, the membrana tympani, and membrane of the fenestra rotunda (membrana tympani secundaria), and the ossicula (malleus, incus, and stapes), with their muscular and ligamentous attachments.

The tympanum or drum cavity proper, lying deeply as it does within the temporal bone, is bounded above, below, in front, and on its inner side with bony walls. In most directions, and especially superiorly, these are composed of thin laminæ. Its floor forms anteriorly a considerable portion of the carotid canal, and inferiorly a part of the jugular fossa. The inner wall, in which are to be found the openings of the oval and round windows, is quite thick, and composed of dense bone. On its outer side the tympanum is limited for the most part by the membrana tympani, a firm, transparent membrane set in a ring of bone (annulus tympanicus). This "membrana tympani" is of importance pathologically because through it pus and other fluid products of inflammation must usually find an exit from the tympanum.

We note also the following relations of the tympanum which show the necessity of knowing its position in cases of disease there. The upper wall or tegmen tympani, often of very thin bone, forms the only septum between it and the meninges of the brain. A plate of bone, also thin, and in young subjects sometimes wanting, separates it from the internal carotid artery. The sigmoid fossa, for the lateral sinus, often encroaches deeply upon the mastoid portion of the temporal bone, and lying in close proximity to the cells which, in the adult, fill this part, is also only separated from them by thin walls of bone. These cells are simply irregular spaces or cavities in the mastoid formed by the division of its interior by thin plates of bone. They communicate freely with each other and (through the mastoid antrum) with the tympanic cavity, are lined by a delicate mucous membrane, and serve an important physiological function. The tympanum is in communication anteriorly with the throat through a partly osseous and partly cartilaginous canal, the Eustachian tube. This canal is about twenty-five millimetres (one inch) in length, is shaped like a flattened trumpet, and is constricted at the point of junction of its two portions. The osseous part is triangular (eleven millimetres long) and quite narrow, having an average diameter of two millimetres. Attached to the roughened edges of this bony canal and to the basilar process of the occipital bone is the hook-shaped cartilage which completes the passage way to the naso-pharynx, where the mouth of the tube forms an oval aperture. On transverse section this cartilage is seen to occupy about two thirds of the lumen of the canal, forming its outer side and its upper boundary, the other third being filled in with fibrous tissue, muscle, and fat. The long axis of the Eustachian tube forms an angle of 40 degrees with the horizon, and one of 135 degrees with the axis of the external auditory meatus. Its physiological function is that of a ventilating shaft and drainage tube. These cavities and passages are lined with mucous membrane, furnished in the Eustachian tube with ciliated epithelium, and continuous with that of the naso-pharynx. It becomes very thin and delicate as it ascends into the tympanum and mastoid cells.

Besides blood-vessels and *small* nerves supplied to the structures within the middle ear may be mentioned, though not to be considered a part of it, the chorda tympani nerve, which, reflected from the facial, passes forwards close to the posterior periphery of the membrana tympani until it reaches the height of the musculus tensor tympani, when it winds forwards between the malleus and incus, being invested with a special fold of mucous membrane, and emerges at the Glasserian fissure.

The facial nerve on its way through the temporal bone passes very near the upper posterior boundary of the tympanum, though it is separated from it by a bony partition. This proximity of the facial renders it liable to injurious pressure from products of inflammation, especially after this septum has been eroded by carious processes.

There are two forms of acute inflammation found to take place within the middle ear quite distinct in their courses and perhaps the result of different causes.

One finds in some cases of cold-in-the-head, where there is always a local congestion of the Schneiderian membrane, a corresponding condition within the tympanic cavity, shown subjectively by a diminution in the hearing power, a disagreeable fullness and sense of pressure, and later by pain in the ear; objectively by the appearance of dilated blood-vessels in the membrana tympani, tenderness limited to pressure on the tragus, and in the later stages of the disease by marked swelling of, and the presence of an opening through, the membrane, with a serous or mucous discharge at the bottom of the external auditory meatus.

In another class of cases occurring more especially in patients convalescing from the exanthemata, measles and scarlet fever, the inflammatory process is very severe, more rapid in its progress, and attended with greater destruction of tissue, the subjective signs being similar to those in the acute catarrhal inflammation, though the pain is much greater.

[1] Read before the Boston Society for Medical Observation, February 19, 1883.

It is this latter disease, of purulent inflammation of the middle ear, in both its acute and chronic forms, and more particularly the complications which so frequently arise, to which your attention is invited.

As has been stated, the middle ear is lined with mucous membrane continuous with that of the pharynx. In cases of disease of the membrane (in the pharynx) the congestion and swelling is likely to extend to the Eustachian tube, and from there it readily reaches the tympanic cavity, its progress being assisted by a peculiarity of the blood supply. For the artery from which branches go to the Eustachian tube and tympanic membrane passes along the under side of the upper wall (of the tube), while the veins, returning the blood, lie along the lateral walls and are consequently compressed by their apposition when the lining membrane becomes swollen. This obstruction to the reflux of the blood soon produces a stasis in the veins of the tympanum and thus brings about the first stage of an inflammation. In the first stage of purulent disease of the middle ear a swelling of the mucous membrane occurs, extends rapidly to the tympanum, and if the membrana tympani is then examined it will be found uniformly reddened and infiltrated, its lustre diminished, its contour distorted; instead of being concave, its outer surface is convex and bulging from the swelling and accumulation of fluid beyond it. After this stage of congestion and swelling of the mucous membrane there comes a stage of transudation in which serum and pus appear and by pressure soon produce a sloughing of the tissues in the membrana tympani and an opening in it through which they find exit.

After the disease has reached its height in the rupture of the drum-membrane and the discharge of pus, resolution takes place in uncomplicated cases. The congestion diminishes, the discharge of pus is less abundant and finally dries up, the perforation in the drum-membrane cicatrizes and closes by a reproduction of the inner and outer coats of the membrane, and the ear is restored to its former condition, though of course with some impairment of its hearing power, — the extent of this loss being dependent upon the size and position of the perforation and the amount of thickening of the mucous and sub-mucous tissues in the tympanum caused by the inflammatory process.

The fact that chronic purulent inflammation is the most common disease among all the affections of the ear would lead one to infer either that resolution without complication is not, however, the rule or that there is negligence on the part of patient or physician in the early and careful treatment of its more critical acute stages. So that instead of the favorable course marking the progress of the purulent process in ordinary uncomplicated cases, which ends in complete resolution, various changes occur which delay convalescence and give rise to complications which modify the aspect of the case. The simple change from the acute to the chronic form of inflammation consists in a subsidence of the swelling and congestion and the cessation of pain while the secretion of pus is still kept up.

This purulent discharge may continue for an indefinite time, gradually diminishing in quantity until healing finally takes place.

Where the destruction of tissue goes on for a long time and a large perforation remains in the membrana tympani, the efforts of nature at repair result in the formation of granulation tissue which produces a cicatricial membrane and fills in the opening. This does not occur, however, in those cases of total destruction of the membrane, and but rarely when the perforation is very extensive.

This reparative process is sometimes misdirected, or from some cause becomes excessive, and the granulations are found to be superabundant, especially in cases where there has been any destruction of the periosteal lining of the tympanum and consequent caries or necrosis of the bone. These granulation masses sometimes also become organized into growths which have received the name of polypi. These are classified under the general terms of mucous and fibrous from the nature of the tissues from whence they spring. The mucous variety includes all the soft vascular growths found to consist of a net-work of blood-vessels held together by loose cellular tissue.

The fibrous polypi are of denser structure, are frequently very tough, and contain fewer vessels. The former are of rapid growth, often reaching a considerable size within a few days, the latter requiring several weeks and even months for full development. These growths may start from any portion of the tympanum, — the fibrous variety also from the auditory canal, — are of any size from small nodular masses to those sufficiently large to fill the external meatus, and occur at any period in the course of the disease.

Among other important changes are those directly traceable to an extension of the inflammation to neighboring structures which may take place in various directions; outwards, along the posterior wall of the external meatus to the outer surface of the mastoid process — not perforating the bone; directly backwards, through the mastoid cells to the meninges of the brain or to the lateral sinus (causing thrombosis); upwards through the tegmen tympani (to the meninges) or inwards, perhaps, through small natural openings in the bone, to the inner ear, thence to the brain, through the aqueductus vestibuli, or along the internal auditory canal. That most frequent, perhaps, and most likely to excite apprehension, because of its liability to reach the cranial cavity, is the extension backwards to the mastoid cells. As has been seen, the antrum mastoideum, though lying somewhat above the floor of the tympanum, offers a ready means of access to the cells, especially when the exit of pus through the membrana tympani is interfered with in any way, as by extreme swelling, by granulations filling the perforation, or in some acute cases by a peculiar nipple-like projection of the mucous membrane in the perforation through the membrana tympani. The inflammation once within the cells and unchecked by treatment progresses rapidly, and the accumulation of pus and transuded serum, here as in the tympanum, brings about necrosis of the delicate mucous lining and bony walls. In adults, however, the resistance offered by the thicker outer wall of the mastoid process is so great that, before an opening is effected for the discharge of pus outwardly, congestion of the meninges takes place, and goes on to real inflammation, meningitis, at once a dangerous and an almost unmanageable complication.

This result is favored by the thinness of the septum of bone corresponding to the inner table of the skull separating the cells from the meninges. In children below the age of puberty in whom the mastoid cells do not entirely fill the mastoid portion, and in whom a comparatively thick wall of bone separates this part from the brain, the liability of extension inwards is greatly diminished. We therefore find that the

course taken is outwards through the mastoid, or along the posterior wall of the meatus, pus sometimes working its way through a fissure in the tympanic ring, in these instances causing similar symptoms with the appearance of a fluctuating swelling behind the ear.

The symptoms of an inflammation affecting the mastoid cells are great dizziness, nausea, vomiting, and a severe pain which is not confined to the ear, but is complained of as if radiating from it in a direction principally towards the back of the head. It may also extend upwards and forwards, though pain in the frontal region is oftener symptomatic of disease extending to the upper portion of the tympanum. A peculiar and characteristic sign noticed by the surgeon is the tenderness or sensitiveness to touch observed when the mastoid is gently percussed, and this is sensibly increased over a small area corresponding to the position of the mastoid foramen. All these symptoms are accompanied by fever; indeed a sudden rise of temperature in a patient with purulent disease is usually indicative of an extension of the inflammatory process. Later in the disease redness, swelling, and fluctuation are observed in the mastoid region.

Extension to the upper portion of the tympanic cavity and through the roof of the tympanum, though seen more rarely than the disease in the mastoid cells, is by no means uncommon, and is often overlooked as a cause for meningitis because of the absence of those objective signs by which the latter is distinguished. There is no swelling in the tissues over the mastoid, little if any redness, no particular tenderness about the external ear.

Examination within the meatus may reveal the presence of granulations or polypi, and there is usually œdema of the upper wall, yet in many cases the presence of a purulent discharge, often coming freely through a large perforation of the membrana tympani, and which may be unnoticed by the patient or is so lightly thought of as to be easily forgotten, is the only external evidence of disease. Severe pain on one side of the head, referred also to the eye, is the principal symptom which causes the patient to apply for relief. Vertigo, staggering, and a tendency to stupor, accompanied with a full, tense pulse and fever, are to be watched for as showing the beginning of meningeal irritation.

There are many other conditions which are the immediate result of purulent inflammation or arise in consequence of it, among which are caries and necrosis of the small bones of the ear with their partial or complete exfoliation, and periostitis within the tympanum or external meatus or upon the mastoid, also followed by partial necrosis, and rarely by the formation of large sequestra.

Paralysis of the muscles of the face on the same side with the affected ear is occasionally seen, and is the result of pressure in the course of the seventh nerve, usually within the bone. Here the prognosis is favorable for recovery of muscular power if the pressure is not long continued. In severe cases, accompanied by extensive necrosis in the tympanum, a more serious lesion of the nerve may be suspected.

To recapitulate. We have here described a very common but peculiar disease of an important organ of sense, which when untreated is very likely to become permanent, is attended with great destruction of tissue, and therefore with impairment or complete loss of function in the organ, and is often the starting-point for many serious and sometimes grave complications.

As regards treatment. Much can be done in the way of prophylaxis, and in common with other writers upon this subject I would ask all members of the profession to carefully watch their patients during the prevalence of scarlet fever and of measles, especially, and do all in their power to prevent the inroad of so tedious and intractable a disease as chronic purulent inflammation so often proves to be. During its very first stages, while the congestive process is extending to the ear, the artificial inflation of the tympanum by Politzer's or Gruber's method is often alone sufficient if practiced several times a day, and it has been shown how this acts by separating the walls of the Eustachian tube, thus relieving the blood stasis, and equalizing the atmospheric pressure. If, however, the congestion has extended too far upwards, and the membrana tympani is red, but not bulging, the application of two or more leeches near the auricle will, by the slow abstraction of blood, put an end to the inflammatory process, and relieve the suffering of the patient. Later paracentesis of the drum-membrane and gentle douching of the canal with warm water may be necessary. Opiates are indicated in all cases with pain unrelieved by the air-bag, paracentesis, or leeching, indeed, whenever the inflammation is so severe as to cause continuous discomfort and loss of sleep.

When the acute stages are over, and the ear is discharging pus, simple cleanliness, preferably obtained by syringing with warm water, and the instillation of mild astringents twice or three times a day *ought* to suffice, but directions for "simple cleanliness" left with the parents of the child are usually *not* sufficient, and it is always well to inspect the ear after it has been syringed, or, better still, instruct the mother in the use of the syringe. This certainly seems an easy matter, but the ease with which it is often done is the drawback to its employment. As one instinctively fears to use any degree of force upon a tender and sensitive ear the consequence is that the purulent collection is allowed to remain unremoved by the syringing, and is itself the source of an irritation, and interferes with the action of the astringent lotions upon the diseased surfaces beneath.

The treatment of redundant granulations in the ear is the same as for those elsewhere, the application of caustics, silver nitrate being preferable to others. It should be used in saturated solution, and upon a cotton-tipped probe applied thoroughly to the surface after all moisture has been wiped away. Light touching only stimulates. For the removal of the larger growths the aural polypus snare is recommended, but its use must always be followed by caustics. Pure hydrate of potassium, the purified potash of commerce, placed directly upon the growth, after protecting the skin of the external meatus by lining it with paper or with absorbent cotton saturated with dilute acetic acid, is a most certain remedy, but requires particular care in its use.

In cases of inflammation recurring in ears long diseased active interference with granulations and with polypi is to be deferred, and measures taken for the relief of the acute symptoms. Douching the ear with warm water, the application of dry heat, and, if necessary, of leeches, with laxatives and opiates, are indicated.

When there is evidence of the invasion of the mastoid cells, and the presence of pus is suspected, prompt

and energetic treatment should be at once carried out, and this even to trephining the mastoid if a simple incision to the bone is not enough.

The great importance of the early employment of Wilde's incision, even before any fluctuation has been observed, cannot be over-estimated. The relief to pain which immediately follows this simple operation in a large proportion of cases ought to be a sufficient reason for it, but when it has been delayed, or when a spontaneous opening has occurred, and we find, too late, that necrosis of the bone has also taken place, its necessity becomes at once apparent.

In the treatment of *chronic* purulent cases much depends upon the condition of the ears found in each particular patient, but the general rule may be laid down that thorough cleanliness, if not strict antisepsis, will be followed by the best results. We know that when we find a variety of methods of treatment and a long list of remedies recommended for any disease it is because that disease is an intractable one. This is certainly true of the affection under consideration, and I hope to be excused from giving a detailed account of the methods in vogue even at present, and shall simply offer the results of my experience in the opinion that the so-called dry treatment with powders of alum, of talc, and that more recently experimented with, of boracic acid, must give way in the majority of cases to the treatment by syringing combined with astringents.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY WILLIAM F. WHITNEY, M. D.

CATARRHAL ULCERATIONS.

VIRCHOW[1] has recently made a communication with the above title in which he shows that the term catarrh is used too comprehensively, and that ulceration only follows it indirectly. The term catarrh should be restricted to the process which takes place in the mucous membrane, and is solely to be diagnosticated by the presence of the secretion. The only condition justifying the name of a dry catarrh is that occasionally found in the bronchi. Then the secreted mass is tough, not moist, and closely adherent. All other conditions which have received this name are merely those where the originally fluid secretion has been rapidly deprived of its water, and there remains behind a firm, compact mass.

Those who do not recognize this barrier have gone further and further and have extended the meaning wider until some organs, the stomach for example, suffer from nothing but catarrh. The term should only be used for those cases where there is an excessive secretion of mucus, the surface occasionally being covered with a layer a finger thick, and every state of irritation should not be designated by this name.

As to ulcerations, he does not consider them as in the regular sequence of catarrh. There are evidences enough to show that all sorts of dispositions are produced in any sickness which can give rise to further consequences. In a child with a tender organization circumstances arise when the epidermis is easily macerated and removed. With insufficient care erosions occur, a crust forms, beneath which pus is produced, and finally an ulcer is found in this place.

[1] Berlin. klin. Wochenschrift, Nos. 8 and 9, 1883.

Virchow thinks that ulcerations of this sort are produced only upon surfaces covered by pavement epithelium. Such surfaces extend quite far into the body. From the lips they can be followed to a little below the cardia, and also as small projections in the stomach itself.

In the respiratory tract there are only very few parts covered by a simple pavement epithelium. On the posterior wall of the larynx between the arytenoid cartilages and the true cords are such places. Here there arises a peculiar kind of ulceration which could be called erosive, since certain portions are deprived of their epithelium, leaving a moist, soft surface exposed. Naturally this does not dry as in the case of the external skin. From the loss of its covering it is exposed to continual irritation, becomes easily deepened, and an ulceration takes the place of the eroded spot.

The same erosion is found at the place where the mucous membrane of the cervical canal of the uterus passes over into that of the vagina. The pavement epithelium is gradually loosened by the catarrhal secretion which flows out from the uterus. Large flakes are cast off, and after a short time the exposed surface assumes a velvety appearance. This is due to the enlargement of the papillæ and the engorgement of the vessels, and from this eventually arise the dark-red granular erosions seen during life. These never present any loss of substance of the true mucous membrane, and almost never pass into real ulceration.

In the remainder of the mucous surfaces of the respiratory and digestive tract erosions do not occur like those above described. In those covered by cylindrical epithelium a loss of substance occurs from a profuse secretion, which is to be considered as analogous to the formation of vesicles in the epidermis. The pavement epithelium cells are connected together so closely that they can withstand for some time the accumulation of fluid beneath them. Finally they give way, and an erosion is the result. In the mucosa clothed with cylinder epithelium the union of the cells is so slight that vesicles cannot be formed, but the tissue itself is at once loosened. Hence it is that there is never a vesicular enteritis or gastritis. All diseases associated with profuse diarrhœa, especially cholera, typhus, and typhoid fever, cause such a desquamation of the mucous membrane. The history of these erosions is not fully made out as yet, and it must be done by a careful examination of the stools during life, as secondary changes are produced with great rapidity after death. To these processes are to be added many of the diseases caused by drugs, for example, those following the use of large doses of mercury.

The surfaces thus deprived of their covering are exposed to all sorts of insults. Bacteria at once find a suitable place on which to develop. Then a diphtheritic condition is produced, and the spot is covered in the same way as in primary diphtheria. In animals a genuine diphtheria may be induced by preparing the ground where the parasite is to grow by the exhibition of violent cathartics.

The so-called uræmic ulceration is simply one of the same kind. The process begins when the urea secreted by the kidneys is diminished, and a vicarious excretion of this from the stomach and intestines takes place, accompanied by marked diarrhœa. Then follows the same sequence, first erosion, then a diphtheritic condition, and finally ulceration. But there is no specific uræmic ulceration, simply a diphtheritic ulcer

which has arisen in a place prepared for it by the uræmia.

The chief point which has been raised in favor of the acceptance of catarrhal ulceration has been brought forward in connection with angina. This is not really a catarrhal angina, but an angina with catarrh. The tonsils and follicles of the tongue and pharynx are of lymphatic construction, and it would be as justifiable to speak of a catarrhal swelling of the cervical lymph glands as of a catarrhal angina. In the same way the abscess which forms in the tonsil has been called catarrhal, and from this the ulcers which follow an inflammation of the follicles of the intestine are often spoken of as catarrhal.

The deep inflammatory processes which are developed in the course of a catarrh, for example, certain unfortunate cases of perichondritis or periostitis of the nose, trachea, or larynx, are frequently referred to this for a cause, when more careful investigation would have shown the dependence upon tuberculosis or syphilis, the catarrh being merely an accident.

The catarrhal ulcer disappears entirely when thus carefully considered, as there is nothing characteristic by which it can be diagnosticated.

FAT NECROSIS, AN OCCASIONALLY FATAL DISEASE.

Balser[1] has published his observations on two cases in which the fatal result could be directly attributed to primary necrosis of the fat tissue within the body.

Attention was first directed to the subject by Ponfick, who described a case in which there were multiple centres of fatty degeneration in the marrow of the long bones. The clear amber-colored medullary substance looked as if dusted over with submiliary, opaque, yellowish-white spots, which the microscope showed were composed of granular bodies, apparently originating from fat cells. Near these were small elongated cells in various stages of a fatty degeneration. The surrounding tissue presented the character of marrow undergoing atrophy. This affection was regarded as a disseminated fatty degeneration of the medullary substance leading to a total necrosis.

The cases described by Balser are to be placed under the same general category, although the change was in the fat tissue in a different part of the body.

By a careful examination of the pancreas and its surrounding tissue there can often be seen, between the lobules of the gland and in the fat tissue, small opaque, yellowish-white points. In the smallest of these the central portion can be readily detached by scraping with the back of a knife, and in the larger ones the centre was already more or less loosened from the periphery. Further, it was by no means an infrequent occurrence to find old and fresh hæmorrhages in the tissues bordering upon such necroses. These latter can become very extensive, and the bleeding very considerable until the picture of a pancreas apoplexy is produced, which has been ascribed by Zenker as a cause for death.

Much difficulty was experienced in rendering these opaque patches transparent, but at last it was accomplished by the following method: A portion of the tissue was boiled in alcohol and ether, then placed for a short time in strong acetic acid, and finally hardened in absolute alcohol. By this means the author was enabled to demonstrate that there was an increased cell formation in the neighboring fat tissue, and that the necrotic portions had arisen solely from the fat tissue. He was unable to demonstrate the bacteria in any of the preparations, although there were fine needle-shaped fat crystals which could be easily mistaken for the parasites.

The result of his work is formulated as follows: There often occurs an excessive growth of the fat cells in the tissue about the pancreas. These exceptionally become so extended, especially in corpulent people, that from their overgrowth a large portion of the abdominal fat dies. And this by its extent alone, or in connection with coexistent hæmorrhage, can cause the death of the individual.

[1] Balser. Virchow's Archiv, vol. xc., p. 520.

DIPHTHERITIC NEPHRITIS.

Furbinger[2] has studied the clinical and pathological appearances presented by the kidneys in ten fatal cases of diphtheria, and finds that they can be divided into three classes. In the first are kidneys which to the unaided eye appear normal. The essential and almost only histological change is seen in a parenchymatous degeneration of the epithelium of the convoluted tubes. This is to be regarded as an abortive form, closely resembling the "fever kidney."

In the second form there is a slight increase in the cortex, which is pale and opaque. The degeneration of the cells is more intense and extensive, affecting the epithelial layer of the glomeruli as well. Commencing interstitial changes are to be noticed, and at times a desquamative condition of the medullary tubes. There are no vascular lesions.

The third form is that of the large yellow kidney, standing parallel to the hæmorrhagic form of scarlet fever. In this there is extensive fatty degeneration of the parenchyma, while the stroma also presents marked changes.

Bacteria were not discovered in any of his cases, although they have been often reported by other observers. Their absence, however, he does not consider in any way disproving the dependence upon a specific bacteritic poison, which may be present in the system and act upon the kidneys in the same way as phosphorus, arsenic, or chromic acid.

SCARLATINAL NEPHRITIS.

Friedlander[3] has examined the kidneys in two hundred and twenty-nine cases of death from scarlet fever and found alterations in about one half. He distinguishes three forms: First, the interstitial catarrhal form; second, the large flaccid hæmorrhagic kidney (interstitial septic nephritis); and third, a glomerulo-nephritis (nephritis post scarlatinosa).

The catarrhal form is rarely fatal, and usually disappears after a few days or weeks. It is recognized clinically by the presence of albumen and casts, and is seldom attended by œdema. It is not to be regarded as a specific form, but like the acute nephritis of pneumonia, typhoid, erysipelas, etc.

When seen at an autopsy the kidneys are moderately hyperæmic, and the glomeruli injected. The epithelium of the convoluted tubes is slightly swollen and opaque, the nuclei are nearer to each other, and are stained more easily than normal; sometimes four or five are found in one cell. Often a little albuminous fluid lies between the capsule of the glomerulus and the vascular tuft. Hyaline and granular casts are to be

[2] Virch. Arch., vol. xci., p. 385.
[3] Fortschritte d. Medecin., vol. i, No. 3, 1883.

seen in the convoluted, and now and then in the straight, tubes, which frequently contain loose epithelium and small round cells. The interstitial tissue is generally unaltered, but there are occasional deposits of indifferent cells. In brief there is hyperæmia and slight opacity and swelling of the renal epithelium, with partial proliferation and desquamation of the same, accompanied by the formation of casts and albuminuria. As clinical experience teaches, this is capable of entire restitution to a normal condition in the course of a fortnight.

The large flaccid hæmorrhagic kidney (interstitial septic nephritis) may appear after a short time, in from three to four weeks. It was comparatively rare, having been noticed only twelve times in all. At the end of sixteen days the kidneys were enlarged and very flabby, the cortical distinctions were lost, and the cortex was of a diffuse reddish-gray-color, interspersed with punctate hæmorrhages, and large hæmorrhagic infiltrations. The epithelium was but little altered, while the interstitial tissue was increased by a deposition of small round cells. This form occurred usually in connection with diphtheritic complications, and is considered only as a secondary result of scarlatina. It may come on very rapidly, the urine presenting no signs a few days before death. In these cases œdema is usually absent, but is present in those of longer duration. Micrococci are ordinarily found in the vessels.

Glomerulo-nephritis is the most important form, is characteristic of scarlet fever, and rarely occurs except in the course of that disease.

The first symptoms are seen in the third or fourth week in the form of œdema, diminished urine, and albuminuria. With the persistence of the process the urine becomes less and less, even anuria, uræmia, and death generally within a week.

This form was present in forty-two cases of the two hundred and twenty-nine. The kidney was injected, often hyperæmic. The glomeruli, however, did not appear as red points, but as gray granules slightly projecting above the surface. Otherwise the organ was normal, except in cases of long continuance, when there was a partial opacity of the cortex. Under the microscope the parenchyma and interstitial tissue were normal. The glomeruli were almost entirely free from blood, enlarged about one half, with a great increase of nuclei. The loops were transformed into a solid body, which could not be discriminated from the wall, the whole in the advanced stage being composed of a finely granular mass with occasional fat granules, micrococci, and numerous polyform nuclei. The capsular epithelium was but little thickened as a rule, the sickle-shaped accumulations being noticed in but five cases.

The affection was considered to be an obstruction of the lumen of the vessels of the glomerulus rather than a compression. A slight interstitial cell infiltration was met with, as well as an occasional hyaline deposit in the walls of the arteries. In this latter case ecchymoses were found. The result of this was to produce an ischæmia of the kidney, with eventually a possible necrosis, and hypertrophy of the heart.

Fischl [1] has noticed in two cases of scarlatinal nephritis peculiar changes in the walls of the vessels which he considers as the results of the disease, and which do not correspond with those recorded by other observers. In his cases the changes were confined to the adventitia, and were presented in two forms. In one there was a great increase of round cells lying externally to the muscularis in a hyaline or slightly striated ground substance. In the second form the adventitia was seen as a broad band, in comparison with the middle coat, formed of fibres. Between these two extremes there were numerous gradations, in some of which the fibres and in others the round oval cells prevailed.

In two cases of glomerulo-nephritis he pictures sections which are to be interpreted as representing a proliferation of the capsular epithelium alone. Such he considers to be the essential part of the process, and the changes seen in the loops are secondary to this and referable to the effects of compression.

[1] Zeitschrift f. Heilkunde, vol. iv., p. 1, 1883.

CHANGES IN THE GANGLIA AND NERVES OF THE HEART IN CONNECTION WITH DISEASE.

Putjatin [2] has examined a number of hypertrophied hearts associated with valvular disease and found, —

(1.) That in chronic affections the nerve ganglions are affected by an encroachment of the inflammatory process.

(2.) In cases of early and relatively slight disease the changes were restricted to hyperæmia and granular degeneration. In chronic and extensive affection of the heart there were evidences of interstitial inflammation with the production of fine connective tissue, while the ganglion cells themselves presented appearances of fatty and pigmentary degeneration. In one case there was entire destruction of the ganglion cells with calcification of the tissue between them.

(3.) Aside from local trouble in the heart and aorta changes in the ganglia may be called forth by chronic constitutional disease (syphilis).

(4.) The above described lesions cannot be without influence on the physiological activity of the heart. In this way many of the functional disturbances and even paralysis of the heart, when fatty degeneration is not present, can be explained. Possibly also some forms of angina are referable to the same cause.

Uskow [3] has studied the nerves of the heart, in cases of hypertrophy combined with chronic interstitial nephritis. He has found that with the growth of muscular tissue the medullary sheath of the nerves is lost, and a process of nuclear proliferation commences. Should an acute disease supervene then the changes in the affected nerves assume the character of an acute parenchymatous inflammation. In the nerve cells lying in the course of the fibres, as well as those in the ganglia of the septum atriorum, the changes were confined to thickening of the capsule and increase of nuclei. The protoplasm itself was unaffected.

LYMPHIANGIESTASIS AND LYMPHORRHAGIA.

The comparative rarity of this affection induced Nieden [4] to report a case where the disease had apparently persisted sixteen years, and give a detailed account of the microscopic appearances of a portion of the tissue that had been cut off.

The disease had its seat in the labia majora, and was characterized by small vesicles from which a milky fluid was exuded, often, especially after muscular exertion, in great quantities. Various external applications were tried in vain, and at last a portion of each labium was removed with the cautery, in hopes that the resulting cicatrix might effect a radical cure. This was

[2] Virchow's Archiv, vol. lxxvi., p. 461.
[3] Virchow's Archiv, vol. xci., p. 453.
[4] Virchow's Archiv, vol. xc., p. 350.

followed by a cessation of the trouble for two years, after which the vesicles had reappeared on the right side. Further trace of the patient was then lost.

The microscopic examination showed that there were no hypertrophic processes present in the skin, as have been found in some of the reported cases. The most marked changes were found directly beneath the papillary layer, and consisted of cavities of varying form and size. In some places there were but a few present, while in others the tissue was transformed into a cavernous mass. The walls of these holes were covered with a single layer of cells, presenting a spindleshaped outline upon section. Into these spaces small canals opened, likewise clothed with an endothelium. These cavities and tubes were filled with a finely granular or fibrillated mass containing a few lymphoid cells. In relation to the papillæ these sinuses lay for the most part directly beneath their base, a few were seen in the lowest parts of the papillæ, while others had quite penetrated to the summit. In many places the papillæ had entirely disappeared, and the endothelial lining was in direct apposition with the cells of the epidermis, or only separated from them by a fine layer of connective tissue.

One peculiarity was that a few of the lymph vessels were covered with a relatively thick layer of unstriped muscular fibres. These were supposed to form a connection between the deep and superficial lymph systems.

HYDRAMNIOS.

Küstner described in 1876 a case of twins with hydramnios, in which he considered that the changes in the heart and liver of one of the fœtuses stood in genetic relation to the overproduction of amniotic fluid. Recently[1] he has met with a second case, which confirms his views in regard to the first.

This occurred in the twelfth pregnancy of a woman about forty years of age. The labor took place at about the end of the fifth month, and the amount of fluid was estimated at 15,000 cc.

The fœtuses, both female, varied in size, the smaller being twenty-five cm. and the larger thirty cm. in length. In the former nothing abnormal was noticed. In the latter a small quantity of clear fluid was present in the abdominal cavity, the liver was hypertrophied, with dilatation of the vessels, and there was an increase in the muscular substance of both ventricles. The placenta had but one chorion, and was œdematous. The umbilical arteries were dilated in different places, while the vein was unchanged.

In the case of 1876 the changes were essentially the same, except that the liver was infiltrated with round cells (cirrhosis), and this he regards as merely a more advanced condition of that found in the present case. From these changes it is concluded that the increase in fluid is derived partly from a transudation following the compression of the vessels on the part of the liver, and partly to an excess of urine (a chemical analysis of the fluid showing an abnormal amount of urea present) from an increased activity of the kidneys dependent upon the hypertrophy of the heart.

— An old lady who lives in Massachusetts heard that Mr. John Bright was going to visit America. "Well," said she, "I hope he won't bring his disease with him." — *Canada Med. and Surg. Journal.*

[1] Archiv f. Gynæcologie, vol. xxi., p. 1, 1883.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

May 14, 1883. Dr. Charles D. Homans presided.

OLD ABSCESS DISCHARGING THROUGH THE URETHRA.

Dr. Osgood reported the case, a woman's. There were pain and tenderness in the neck of the bladder. The urine was diminished and contained oxalates, also blood corpuscles, but there was no more albumen than was accounted for by the blood. The patient had had cystitis, which had been treated with boracic acid and opium. Vomiting had existed all winter, but it was the only symptom pointing toward uræmia, and there was constipation, with a dry, glazed tongue, and no œdema. The uterus was displaced forward. Warm water injections by the husband two or three times in the twenty-four hours gave relief, and an old abscess broke, discharging offensive pus through the urethra. Pain followed this, first in the neighborhood of the left kidney, then of the right. Additional treatment was jaborandi, with external heat, the drug not producing a moist skin, although pushed to the point of salivation. The urine became clear, and the patient is gaining.

Dr. J. J. Putnam read a paper on

THE TRUE SIGNIFICANCE OF SOME OF THE PROMINENT SYMPTOMS IN SO-CALLED SPINAL CONCUSSION,

which has been reserved for publication.

Dr. Hodges said that the present favorable view of the prognosis in these cases was a comparatively new one. Up to a short time ago it had been considered as extremely grave. So far as he knew, his own paper before this Society in 1881 was the first to speak of their almost invariable curability. That they do recover is shown by a mere glance at the elaborate tables of Mr. Page, of London. Malnutrition has a great influence in the causation of these cases. The shaking of a railroad accident, the subsequent interruption of the habitual routine of a person's life, and the poverty and anxiety which are the results of the injury, all concur to destroy the appetite, impoverish the bill of fare, and to effectually keep the patient from recovering. When money relieves this anxiety and improves his table, then he begins to get well. The speaker mentioned a case in which by his advice interested parties had given a claimant a credit with the butcher and grocer, and the step had appeared to be a good investment for the defendants as well as an act of charity.

Dr. Putnam stated that the condition is aggravated by the use of bromide of potassium. It is better treated by tonics.

In answer to a question by Dr. Edes he said that the evidence of organic disease is the exaggerated reflexes, disturbance in urination and in muscular work, that is, permanent decline. Of themselves the exaggerated reflexes are of little account.

Dr. Webber spoke of the possibility of a period of latency before organic symptoms appear. He mentioned a case of a man who fell ten or fifteen feet

down a bank, was lame a few days and felt poorly, then worked for some weeks without discomfort. Illness came on gradually, and he died of myelitis, as was proved by the autopsy. There was no other known cause for the disease. Dr. Putnam had said nothing of the influence of fright, although it is referred to by Mr. Page. We can, perhaps, scarce estimate the effect on a nervous person who is traveling thirty or forty miles an hour in safety, as he supposes, when he is suddenly shaken with everything about him breaking up at once. We know, however, that fright arising from much slighter causes produces chorea, and may cause convulsions or other nervous disturbance. Dr. Putnam's first case would have been more complete had the eyes been carefully examined with reference to possible atrophy. Cases of locomotor ataxia resemble it in so far as there was limited field of vision with loss of perception of color. When examined with the ophthalmoscope these patients show atrophy of the optic nerve. Had such a change been found it would have been proof of organic change in the nervous system. If it was wanting the cases would have resembled hystero-epilepsy, in which similar limited vision is found. He referred to the case of a young lady whose carriage was struck by a locomotive. She was more or less bruised and hurt. Some time after he saw her in convulsions which resembled hystero-epilepsy. Tenderness existed over one ovary, there being some uterine displacement, and there was unilateral spasm on that side. This continued at intervals one or two years. When seen, just before trial, there was contracture of both arm and leg. She got a good award, afterward married, and partly recovered. At the time of the accident she was probably run down, he thought nervously. Dr. Putnam did well to mention the bad results and long suffering arising from strain of ligaments and the fibrous and soft parts about the vertebræ. He mentioned a soldier who was during the war struck over the sacro-iliac synchondrosis by a fragment of shell, knocking him down and severely bruising him without breaking the skin. He has suffered great discomfort from pain much like that found after railroad injuries, and his complaints are similar but less emphatic.

DR. EDES recalled four cases already published[1] where after a fall not involving injury to the bones of the spinal column symptoms of organic disease of the cord appeared, such as paralysis, muscular wasting, contractures, increased tendon reflexes, spastic gait. In the most severe of these there was absolute paraplegia, with extreme contracture of the arms. A post-mortem examination showed no lesion of the vertebræ, but degeneration of the descending peduncular part and of the columns of Türck. This was one of the cases mentioned by Mr. Page where the injury was concentrated at one point of the spine, the patient having fallen across the wheel of a wagon. It would appear that shock may cause organic disease, even if very rarely.

DR. PUTNAM answered a question of Dr. Bradford, that absence of tendon reflex, with excess of superficial reflex, and with atrophy, means organic disease of the cord. The absence of knee reflex alone is presumptive evidence.

DR. BRADFORD said that Mr. Page being a railroad surgeon has of course an experience of cases in litigation differing from those of Dr. Edes in hospital.

[1] Boston Medical and Surgical Journal, 1882, vol. ii., p. 265.

DR. PUTNAM remarked that Mr. Page had himself called attention to this sort of specialty in his cases, but that the fact remained that if the cases exist they will fall into the hands of some one, and up to this time there has been absolutely no autopsy of a railroad case with organic disease.

DR. WEBBER mentioned a case with degeneration of posterior pillars of the cord, which is referred to by Mr. Page, who, however, does not think it a case of this class. The want of autopsies may be explained in part by the fact that under any circumstances it is rare to examine the spinal cord; and, moreover, attention has been called to such cases only within a few years, and these patients do not die, but live with more or less discomfort and reduced health or strength for an indefinite period, dying of some acute disease. Also, the need of living economically takes them into small places, where any autopsy would be less likely to be made.

DR. C. F. FOLSOM said that he had seen cases similar to those reported by Dr. Putnam, in which the symptoms had followed a severe mental shock without physical injury. The disease in many cases is to a great extent mental, and is most benefited by treatment suited to mental diseases. There are cases, in his opinion, where some of the symptoms, following spinal injury or concussion, are due to organic disease of slight extent and for the most part curable, besides the commonly recognized diseases myelitis, meningitis, etc.

DR. PUTNAM said that almost all these symptoms can be produced without injury to the back. In the mental condition of shock any pain may be dwelt on. We must prepare our minds to see functional disease look very like organic.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

C. M. JONES, SECRETARY.

FEBRUARY 19, 1883. DR. JELLY presided.

DR. SPEAR read the regular paper on

OTITIS MEDIA PURULENTA.[2]

DR. BLAKE said that this was a subject important to the general practitioner as well as to the specialists. The cases often begin during the course of general diseases or as a sequel to them, and physicians should give these conditions more attention. As regards the "dry treatment" of this disease, it has been carried by some aurists too far, the syringe being practically excluded from their practice. In his opinion a middle course is the better and the safer. If there is a very free discharge it is better to use the syringe at first; but after the discharge grows less more rapid progress is made if the dry treatment is substituted and continued to convalescence.

DR. J. O. GREEN agreed with Dr. Blake that the dry treatment had been carried to extremes. He had seen cases in which it was positively injurious. In old, chronic, purulent otorrhœa, for example, if the dry treatment is used there will be a great deal of caking in the angles and corners of the parts. It is better to wash it out first. In suitable cases, however, the dry treatment is a great advance on the old methods, but

[2] See page 485 of this number of the JOURNAL.

to give up the syringe entirely is a mistake. In some cases if the syringing is carelessly done water is left behind in the ear passage, and this residuum may be detrimental. It becomes heated by the blood, and practically acts as a poultice. This objection will not hold, however, if the meatus is thoroughly dried after the syringing, and by applying the powder at this time you get a sensible dry treatment.

In response to a question by Dr. Blake Dr. Green said that he was in favor of drying out the meatus with cotton, and then applying the powder.

Dr. Blake said that the drying after the syringing was the important point. He had endeavored to get absorbent cotton made into a wick to be cut up into suitable lengths for the purpose, but no method had yet succeeded. The most convenient article for the purpose he had yet found was one made by sewing cotton into a wick with fine silk. One can make in this way a good wick of any size or length, and while it was still experimental it had worked very well in his practice.

PHYSICAL PROOF OF CHASTITY.

Dr. Bowditch spoke of a case in which a young woman had been accused of unchastity. She came to him with her accuser to have an examination made which should demonstrate that she was intact. After some consideration he had declined to make any examination, stating to them his reasons as follows: that it was impossible by local examination to determine the question at issue. The presence or absence of the hymen does not settle the question either way, for coitus may have taken place or been attempted while the hymen remained intact, and on the other hand its absence may be due to accidental rupture from various causes.

PINS IN THE VAGINA.

Dr. C. M. Green reported a case of a little girl who was brought to him with the story that pins which had been used to scratch the genital organs had disappeared, and an examination was desired. The pins were said to have been in the vagina for four months. The points had been discovered by the mother, but he only succeeded in finding them after etherizing the child, when two, lying side by side, were removed by the forceps. They were bright and fresh in appearance, were not imbedded, and the removal caused no bleeding. These points led him to think that the story told was untrue, and that they had been recently, perhaps intentionally introduced, or, possibly, lost by the nurse in titillating the parts. Such a case might become important in a medico-legal point of view.

PENNSYLVANIA STATE MEDICAL SOCIETY.

Second Day. At the beginning of the session Dr. Craig, of Columbia, read an

ADDRESS ON SURGERY.

The topics of interest to surgery, which have been recently considered in medical journals, were referred to, and especial attention was given to conservative surgery, the value of antiseptic precautions in operative surgery, and to the use and abuse of anæsthetics.

Dr. E. A. Wood, of Pittsburg, gave a lecture upon

A DEFORMITY THAT SOMETIMES FOLLOWS OUTWARD DISLOCATION OF THE FOOT.

As the result of laceration of the ligaments, and pro gressive changes of the distal end of the tibia, the inter-malleolar space seems widened, and after the patient begins to walk upon the foot, the ankle-joint yields so that finally a condition of valgus is set up, owing to want of repair of the internal lateral ligaments. The only way to obviate this difficulty is to keep the foot in suitable dressings for a long time until repair has been fully accomplished; this may require a year or even more.

Dr. William Pepper, of Philadelphia, read a

CONTRIBUTION TO THE CLINICAL STUDY OF TYPHLITIS AND PERITYPHLITIS.

He deprecated the use of laxatives, and advocated operation as soon as local suppuration is detected.

Dr. S. W. Gross exhibited some cases, and read a paper entitled

THE THOROUGH REMOVAL OF CARCINOMA OF THE BREAST.

He advocated the entire removal of the mammary gland and all infected tissues in the neighborhood in cases of carcinoma of the breast, without reference to the size of the growth, no matter how small the malignant growth may be, or how sound the skin may appear. Out of twenty cases seven remained free from the disease for periods ranging from eleven months to fifty-six months.

Dr. J. C. Wilson, of Philadelphia, read a paper on

THE TREATMENT OF PURULENT PLEURAL EFFUSIONS

recommending paracentesis, free drainage through a permanent opening, and the use of antiseptic solutions, preferably of mercuric bichloride (grain 1 to 5000). The clinical history of several cases were given.

Dr. Charles K. Mills, of Philadelphia, read a communication on

THE MEDICAL SERVICE OF INSANE HOSPITALS.

He pointed out the need of having more medical attendants in asylums instead of charging one physician with the care of several hundred patients, as now is too frequently the case. There should be an opportunity for medical students to serve in the wards and study insanity. Every large hospital for the insane should be provided with a staff of competent and conscientious consulting physicians, which should be active and not simply nominal consultants. Pathology and histology should be represented by special officers of the institution; where men competent to make autopsies and microscopic examinations cannot be obtained as residents, some arrangement might be made with able and even eminent men in neighboring cities to perform the work on the spot, or to have specimens sent to them.

Remarks on Scarlet Fever, by Dr. E. O. Bardwell, were referred to by title without reading.

Dr. Charles B. Nancrede reported a case of Cancer of the Breast treated by the principles advocated by Dr. Gross.

A communication from the Philadelphia Anti-Vivisection Society was received and referred to a committee to report at the next meeting.

On motion of Dr. W. W. Keen, the State Medical Society of Pennsylvania unanimously requested the Legislature to pass the amended Anatomy Bill as it is now before the House.

THE UNITED STATES CONGRESS AND THE SURGEON-GENERAL'S OFFICE.

On motion of DR. S. D. GROSS, the following preamble and resolutions were adopted: —

WHEREAS, This Society has observed with regret that the Bill reported in the last session of Congress, by the Committee of Public Buildings, recommending the erection of a fire-proof building to contain the library and museum of the Surgeon-General's office, was passed over in the pressure of business, and

WHEREAS, The medical profession of the whole country is interested in the preservation of the same, therefore, be it

Resolved, That, in the opinion of this Society, it is the urgent duty of the incoming Congress to provide for the erection of a suitable fire-proof building to receive the library and museum above named, so that the books and specimens may be safely kept and made easy of access.

Resolved, That this Society strongly deprecates any change from the present management of the Library and museum, and, above all, the severing of these collections by the merging of the power into the National Library, as destructive of its utility.

Resolved, That it is highly to be desired that Congress should make a sufficient annual appropriation to admit of the purchase of all new medical books and journals, wherever published, in order that this, the library of the medical profession of the United States, may manifest its usefulness. It is further recommended that authority be given to complete the Index Catalogue. And it is further

Resolved, That the members of the Society will regard it as a duty to impress these views, either personally or by letter, on such Senators and members of Congress as they may be acquainted with, and that a copy of these resolutions, duly authenticated, shall be sent by the secretary to each Representative and Senator from this State.

On motion of DR. H. H. WHITCOMB, the minutes of the Permanent Secretary were directed to be read at the close of each day's session; and the Committee on Publication was directed to publish in their report all the resolutions affecting the next yearly meeting.

COLLECTIVE INVESTIGATION OF DISEASE.

A resolution was offered by DR. CURWEN, and adopted by the Society, that the President appoint a committee of three members on each of the following branches: Medicine, Surgery, Diseases of Women and Children, and Insanity and Idiocy. The duty of the committee will be to prepare a series of questions calculated to obtain the history and spread of the different forms of these diseases, after the plan of the Collective Investigation Committees of the British Medical Association.

The Society again convened at two o'clock. The treasurer, DR. BENJAMIN LEE, read his report. It showed that the balance on hand May 11, 1882, was $1,965.68; receipts during the year, $2269.91; total, $4234.59; total expenditures, $1871.75; balance on hand, $2363.84.

OFFICERS, DELEGATES, AND PLACE OF MEETING.

The report of the Nominating Committee was read as follows: —

Officers for 1884: President, Henry H. Smith, of Philadelphia; Vice-Presidents, Ellis Phillips, of New Haven; H. B. Van Valzah, of Clearfield; J. W. Kerr, of York; S. S. Schultz, of Danville; Permanent Secretary, William B. Atkinson, of Philadelphia; Recording Secretary, Morris S. French, of Philadelphia; Corresponding Secretary, John G. Lee, of Philadelphia; Treasurer, B. Lee, of Philadelphia; Additional Members of the Committee on Publication, Hugh Hamilton, of Harrisburg; James Tyson and Charles S. Turnbull, of Philadelphia; Members of the Judicial Council, A. Rothrock, of McVeytown; George O. Moody, of Titusville; William Pepper, of Philadelphia.

Delegates to the American Medical Association: S. R. Rutledge, of Blairsville; J. L. Stewart, of Erie; R. A. Campbell, of Lewistown; George F. Horton, of Terrytown; W. S. Rowland, of York; J. W. C. O'Neal, of Gettysburg; R. Rothrock, of Middleburg; R. L. McCurdy, of Freeport; W. T. Bishop, of Harrisburg; David Englemann, of Easton; E. A. Wood, T. F. Gallagher, and John Semple, of Pittsburgh; J. Willis Houston, of Oxford; Thomas Lyon, of Williamsport; J. T. Shepler, of Dunbar; Oscar H. Allis and H. St. Clair Ash, of Philadelphia; H. W. McReynolds, of Bloomsburg; J. W. Tweedle, of Weatherly; J. C. Shendan, of Cambria; C. Linker, of Schuylkill; R. H. Chase, of Norristown; Harvey Kratz, of Hilltown.

Delegates to the Delaware State Medical Society: Henry Price, of Kennett Square; W. G. Porter, J. C. Wilon, L. K. Baldwin, and J. A. McFetran, of Philadelphia.

Delegates to the Massachusetts State Medical Society: E. P. Allen, of Athens; P. B. Breining, of Bethlehem; Alice Bennett, of Norristown; G. K. Halberstat, of Pottsville.

Delegates to the Medical and Chirurgical Faculty of Maryland: Hugh Hamilton, of Harrisburg; C. F. Spangler, of York; Edward Jackson, of West Chester; E. T. Bruen, of Philadelphia; R. S. Seiss, of Littlestown; F. P. Henry, of Philadelphia.

Delegates to the Ohio State Medical Society: C. B. Kibler, of Coney; J. G. Cunningham, of Kittanning; Charles T. Hunter, of Philadelphia.

Delegates to the New Jersey State Medical Society: Thomas D. Dunn, of West Chester; H. H. Whitcomb and E. M. Corson, of Norristown; Henry Leffman, J. T. Eskridge, and Joseph Hearn, of Philadelphia; G. D. Nutt, of Williamsport.

Delegates to the West Virginia State Medical Society: George Stiles, of Conshohocken; W. J. Asdale, of Pittsburg; Charles S. Turnbull, of Philadelphia; Frank Etherenfield, of Indiana.

The Society is to meet next year in Philadelphia, and J. B. Roberts is to be chairman of the Committee of Arrangements, his associates to be chosen by the Philadelphia County Medical Society.

The report of the committee was adopted.

TRANSACTIONS.

The following, recommended by the Nominating Committee, was unanimously adopted: —

Resolved, That the Publication Committee be instructed to have transactions of the Society printed and ready for distribution within three months from the date of final adjournment of the Society.

DR. G. O. MOODY, of Titusville, delivered an

ADDRESS ON OBSTETRICS.

He discussed the treatment of abortions, and recommended early and complete removal of secundines. In referring to the obstetric forceps he spoke highly of Tarnier's instrument, but thought that its use should be restricted to the skilled obstetrician. Puerperal convulsions, nervous, anæmic, congestive, and uræmic, were considered, and venesection condemned in all forms, except, possibly, as a prophylactic at the first warning of trouble. Hydrate of chloral and potassium bromide were especially recommended, with delivery as rapidly accomplished as possible. The prevention of rupture of the perinæum is best accomplished by external support, and in precipitate labor by the use of an anæsthetic carried to complete and profound unconsciousness. Extra-uterine pregnancy, oxytocics, laceration of the cervix, post-partum hæmorrhage, placenta prævia, and antiseptic midwifery were also discussed. The use of the newly-discovered alkaloid of ergot (described by Chahbazian, of Paris), in doses of one fiftieth grain, given hypodermically, was mentioned as promising great advantages over ergot, which is too slow, and often unreliable.

DR. HENRY LEFFMANN, of Philadelphia, read the

ANNUAL ADDRESS ON HYGIENE,

in which cleanliness and fresh air were insisted upon as the best antiseptic agents. With regard to zymotic diseases, the condition of the system which makes it the fitting soil for the development of low organisms was considered as being of more importance to the physician than the germs themselves. He deprecated the antiseptic treatment based upon the destruction of hypothetical disease germs.

DR. SAMUEL AYRES, of Pittsburg, read a paper on

OUR ASYLUMS AND OUR INSANE,

in which some prevailing abuses were pointed out. He urged that the superintendent should devote his whole time to the medical treatment of his patients, and not be required to attend to commercial and business details, which belong to the steward. Overcrowding, the lack of pathological study, and abuses by attendants were condemned, and a better provision for the medical treatment advocated by increasing the number of resident physicians, by confining the medical superintendent to his legitimate duties, and by the appointment of a consulting board, who should regularly visit the hospital. The neglect of gynæcological examination and treatment in many of our asylums is almost criminal. In order to prevent cruel treatment of patients detectives should be sent into the wards, and summary and exemplary punishment should be inflicted upon any attendant found to be guilty of abusing patients.

DR. R. J. LEVIS, of Philadelphia, described Some Surgical Expedients in Emergencies, exhibiting a number of improvised instruments, which he had employed on various occasions in emergencies.

DR. P. D. KEYSER, of Philadelphia, communicated a statistical paper on Ophthalmological Observations during Ten Years' Service in Will's Eye Hospital. DR. JOSEPH HEARN presented some patients under treatment for rodent ulcer, and one entirely cured. He recommends caustic potassa or the knife. DR. J. O. SHOEMAKER read a hygienic paper on The Hair, its Use and Care.

The report of the Committee on the Schedule of Subjects for

PRELIMINARY MEDICAL EXAMINATIONS

was presented. After considerable discussion the resolution was adopted, making the schedule presented yesterday obligatory upon the students of the members of the several County Medical Societies. Any County Society refusing to carry out this resolution is liable to lose its representation in the State Society.

INSTRUCTION FOR NURSES.

PROF. S. W. GROSS offered a resolution, which was adopted, that all County Societies in the State be requested to take measures for providing suitable instruction for nurses.

An amendment to the Constitution and By-Laws offered by the Philadelphia County Medical Society was laid over for one year; it requires all documents and addresses to receive the recommendation of a County Society before being placed upon the programme of the annual meeting.

Resolutions with regard to the death of Dr. David Schenck were directed to be entered upon the minutes.

The Committee on the Communication from the Anti-Vivisection Society consists of Drs. H. C. Wood, S. Weir Mitchell, J. T. Eskridge, E. A. Wood, and William S. Little.

Receptions were given in the evening by Drs. J. K. Weaver, Mary Stinson, and Mr. George Rogers.

THIRD DAY.

DR. JOHN CURWEN, of Warren, read a well-written paper on

MEDICAL DISORDERS.

He said that it is most assuredly a subject demanding the most earnest and persevering investigation by the profession to trace out the cause of the peculiarly untractable character which mental and nervous disorders have latterly assumed, to discover if possible, and we believe it is possible, the reason why they are so. In such investigations it is desirable and important to keep constantly before the mind the error into which all are likely to fall, of confounding cause and effect, and thus nullifying the correctness of the results to be attained. No one doubts that physical diseases are transmitted from parent to child. That we cannot explain the reason does not invalidate the fact, and to endeavor to discover that reason should be our prime effort. In certain families part of the children will be found to have not only the physical peculiarities of one parent, but the special mental idiosyncrasies of that parent, while the other members will have all the physical and mental traits of the other parent. In many cases actual disease may be transmitted from parent to child, and this tendency may be traced back through one or more generations. To the indulgence in intoxicants is unquestionably to be traced much of the moral depravity, want of true principle, and attendant mental inability to exercise proper control, or resist certain forms of temptation, which characterizes the rising generation. In this fact of the impaired physical health of the mother also lies the explanation of the great difference sometimes observed in certain members of a family who seem to be constituted mentally or morally diversely from the other children. During the period of gestation the mother should be enlivened by cheer-

ful scenes and pleasant impressions of every kind, so that the mind may be led into bright and healthful thoughts.

During infancy and early childhood the greatest care must be given to the physical health and condition, so that the child may be strengthened for that course of discipline and school education through which all should pass. The increasing activity of the first few years of life needs to be regulated, not restrained. The child should not be kept at school too closely, as this form of restraint has the double effect of increasing the irritability and the dislike to the lessons to be learned. Too close application at an early age is apt to strain the mental powers and in this way retard the development. The steady continuous influence of a good example will do more than precept upon precept to impress upon the mind of the child the important lesson that true happiness is always to be secured. A true and healthful education consists in such a cultivation of each of these states that one shall not preponderate over the other. Ample and regular nutrition is essential to the proper growth and development of the body. Next in importance to nutrition must be ranked sleep, to recruit the exhausted powers. Those who do the best work and the largest amount of it are those who carefully observe these requirements. Observation has clearly shown that those who make the greatest apparent progress in early life are not those who hold out to the end, while those who are more slow are more sure to retain and better able to make that knowledge. Bodily and mental habits have also a decided influence on the functions of the different organs.

Dr. J. I. Eskridge read a paper on the Diagnosis, Prognosis, and Treatment of Mitral Constriction, and Dr. James B. Walker one on Lithæmia.

Dr. Edward T. Bruen read some clinical notes on

THE USE OF CONVALLARIA MAJALIS,

in which its action was described as a heart tonic more reliable in strengthening the contraction and steadying the heart than digitalis, and less likely to cause gastric disorder or cumulative effects.

A communication was received from the West Philadelphia Medical Society condemning any attempt to alter the Code of Ethics as being prompted by selfish and mercenary motives. On motion it was directed to be entered upon the minutes.

Dr. William S. Little, of Philadelphia, read a suggestive and interesting paper on the possibility of abnormal ocular conditions, through the sympathetic system, impairing the functions of the uterus, and gave the histories of several cases in which irregularities of menstruation disappeared after correction of some ocular defect.

Dr. J. M. Anders, of Philadelphia, discussed the

HYGIENIC MANAGEMENT OF CONSUMPTION,

and especially the local climatic improvement of the sick apartment by living plants. He quoted several cases in which a strong hereditary tendency to phthisis had been overcome by the occupation of the horticulturist. Flowering plants with oppressive odors are generally less advantageous than vigorous foliage plants, especially those with soft, thin leaves. This paper attracted much attention, and the reports of cases were of great interest.

The President announced the following

APPOINTMENTS FOR THE NEXT MEETING IN 1884.

Address on Medicine, Dr. W. H. Daly, Pittsburg; Surgery, Dr. J. B. Roberts, Philadelphia; Obstetric Dr. Jacob Price, Westchester; Hygiene and Stat Medicine, Dr. John G. Lee, Philadelphia; Menta Disorders, Dr. Alice Bennett, Norristown; Ophthalmology in its Relation to General Medicine, Dr. William S. Little, Philadelphia.

Standing Committees for Collective Investigation of Disease:—

Lunacy and Insane Asylums, Drs. John Curwen, J. N. Kerlin, S. S. Schultz.

Medicine, Drs. James Tyson, C. K. Mills, R. H. Chase.

Surgery, Drs. R. J. Levis, S. M. Ross, James McCann.

Diseases of Women and Children, Drs. Albert H. Smith, William Goodell, C. A. Rahter.

Ophthalmology, Drs. Charles S. Turnbull, P. D. Keyser, J. A. Lippincott.

Nervous Diseases, Drs. S. Weir Mitchell, J. L. Stewart, James Ziegler.

At eleven o'clock the Association paid a

VISIT TO THE STATE LUNATIC ASYLUM

near Norristown and inspected the buildings and administrative arrangements.

The final session convened in the Chapel of the Hospital at two o'clock. Dr. Benjamin Lee offered a series of resolutions, after referring to the able papers which had been presented thoroughly discussing the subject of asylum treatment from every stand-point, declaring that the charge that some persons are deliberately incarcerated in insane asylums is false and is an unworthy aspersion on the medical profession; and calling upon the State Legislature to make such appropriations as are judged necessary by the medical officers, and especially such as will warrant an increase in the number of the medical staff. These resolutions were unanimously carried.

The newly elected President, Dr. Henry H. Smith, was inducted to the office by a committee appointed by Dr. Varian, the retiring President, who made a brief address thanking the Society for the courtesy they had shown to him, and asking the same for his successor. After a few remarks from Dr. Smith the association adjourned, to meet in Philadelphia, May 13, 1884.

Recent Literature.

Quain's Elements of Anatomy. Edited by Allen Thompson, M. D., Edward Albert Schafer, F. R. S., and George Dancer Thane. Ninth Edition. New York. Wm. Wood & Co. 1882.

Quain's Anatomy has long been acknowledged as the best treatise on anatomy in the language. Opinions, indeed, have differed as to whether it were not too comprehensive for a text-book, and there has been well-founded complaint of many of the illustrations; still, no one has disputed its superiority when viewed from a scientific stand-point. To maintain this position frequent additions and revisions are indispensable, and these have been so considerable in the new edition now before us as to call for a somewhat extended notice.

The editors are Professors Thompson, Schäfer, and Thane, the venerable Professor Sharpey, to whom

this edition is very properly dedicated, being no longer among them. The revision of the first volume has been made by Professor Thane.

The description of the bones shows a marked improvement. We are very glad to find that two temporal ridges have at last found their place in an English text-book, and regret only that they are not in the figure as well as in the text. A judicious change has been made in adopting the system of three curved lines on the ilium instead of two, as in previous editions. The anterior intertrochanteric line is more accurately described, and other points in the femur, previously passed over, have received due attention. The section on craniology has been much enlarged. We are surprised, considering the thoroughness of the work, that the internal structure of bone should not have been treated of, and we regret that the old-fashioned figures of the bones have not been replaced by larger and better ones. We notice no very important change in the section on joints, which was already very satisfactory.

The muscles and fasciæ also are treated nearly as before, though some improvements and additions — notably in the section on the perinæum — are to be noticed. The description of the muscles of the lips is hardly up to the times. The figures of the arteries and veins are colored, which has not been the case in previous editions. The section on the arteries, though not materially different, shows that care has been expended upon it. We are delighted to find the torcular Herophili correctly described, and, as before, regret only that the figure does not agree with the text. Another very welcome change is the recognition of twelve pairs of cranial nerves. The volume contains a very good chapter on the superficial anatomy of the body, written with Mr. Godlee's assistance, and one on the surgical anatomy of hernia and of the perinæum.

The second volume comprises a treatise on histology, the anatomy of the viscera, and embryology. The two former by Professor Schäfer, the last by Professor Thompson. The histology in the eighth edition was good, but it has been most thoroughly revised, and in parts rewritten. We find here the newest views on cell structure and on the steps of division of the nucleus. Muscular fibre being a field in which the author won some of his earliest laurels, is, of course, treated admirably. Without fully accepting his theory, we are inclined chiefly to take exception to the author's reliance on the polariscope, which, in concurrence with Ranvier, we are inclined to consider misleading in this inquiry. Both in the histology and in the chapters on the organs Professor Schäfer shows a breadth of mind and an extent of reading which we think are rarely found among English (and American) anatomists. The bibliography is very full and valuable. We find a reference to Warren's fat columns in the skin, which have received but little notice. Recent investigations showing that the cricoid moves on the thyroid, instead of the thyroid on the cricoid, as is usually taught, are alluded to, and there are numberless other references to recent discoveries scattered most widely throughout scientific literature. The brain is treated with a thoroughness and clearness that deserve the highest praise. The liver is described according to His's demonstrations, to wit, as having a true posterior surface. Aeby's studies on the ramifications of the bronchi are duly noticed.

We will not multiply instances, suffice it is to say that this part of the work in particular is so fully up to the times as to deserve to be called new. We have noticed but one cause for complaint in Professor Schäfer's work, and this is rather a comical one. At the end of the article on the heart we are coolly told in a foot-note that "tables exhibiting the weight of the heart at different ages, and also the average dimensions of the auriculo ventricular and arterial orifices, will be found in previous editions of this work." If these statistics are of value why are they not given? We surely cannot be expected to buy an old edition to supplement the new.

Much praise is to be given also to Professor Thompson for the embryology, which is an excellent treatise, well illustrated, containing the results of recent work and accompanied by a full bibliography.

The two volumes of this edition contain respectively 747 and 947 pages against 680 and 850 in the preceding one. The work certainly has a formidable appearance, but it must not be forgotten that the purchaser obtains not only a good anatomy and embryology, but also the best treatise on histology in English.

T. D.

Lectures on Medical Nursing. Delivered in the Royal Infirmary, Glasgow. By J. WALLACE ANDERSON, M. D., Lecturer on Medicine, Royal Infirmary School, and Physician to the Royal Infirmary Dispensary, Glasgow. Second Edition. New York: Macmillan & Co. 1883.

This little book of 225 pages contains a series of ten lectures addressed to the nurse probationers in the Glasgow Infirmary. The author sets before himself at the outset the aim not to try to teach too much, and we think keeps for the most part from that fault, which is so common in books of this class. Perhaps it may occur to practitioners who are accustomed to regulate their doses of alcohol as carefully as any other therapeutic agent, that the instruction of nurses as to those characters of the pulse which show that stimulants should be diminished is uncalled for. But undoubtedly the author would disclaim any intention of making the nurse a judge of the advisability of continuing an ordered treatment, or of authorizing her to stop it except temporarily. Certainly a nurse who has common sense enough to appreciate her proper relation to the physician can find a great many valuable suggestions in this book, and the very few explanations that are given outside her actual sphere will do her no harm; while the officious nurse, whom we occasionally see, is likely to remain so whether she knows little or much beyond her strict requirements.

The volume is by no means unworthy the personal attention of the medical man. Its many suggestions for the comfort of the patient consist for the most part of little things, but they are the sort of things that contribute much to the successful management of a case, and we suspect that many physicians hold them as too trivial for their own attention. By relegating them entirely to the chance knowledge of the nurse we lose what might be an important aid in the treatment.

— American pork is now prohibited (from fear of trichinosis) from Germany, France, Greece, and it is said also from Spain.

Medical and Surgical Journal.

THURSDAY, MAY 24, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

HEREDITARY SYPHILIS AND IDIOCY OR JUVENILE DEMENTIA.

THE many unexpected ways in which syphilis presents itself make it a disease of unusual interest to all who employ their thoughts with the unsettled problems of medicine. To us, too, in America, it is becoming a subject of closer interest as we approach more nearly the social conditions of older countries. Perhaps the reason for the interest in the disease which its students find is that it presents so many unsettled questions and comparatively unexplored fields. Of the many points at which it is being studied probably the most general interest is felt in its manifestations in the nervous system and its hereditary influence. Special interest ought, then, to centre on its hereditary influence on the nervous system, a subject which has been very little studied. An article devoted to The Influence of Hereditary Syphilis in the Production of Idiocy or Juvenile Dementia, in the current number of *Brain*, by Dr. Judson S. Bury, seems well worthy of special attention. Insanity from acquired syphilis is by no means uncommon, and all the morbid changes found in such cases are also found in the subjects of inherited disease, and the effects on a developing brain would seem *a priori* to be not less marked than on a brain which had reached maturity. How frequently idiocy actually results is quite unknown, but our author proceeds to give definite proof of its occasional result.

The literature of the subject is by no means voluminous, but contains a certain number of careful observations which bear more or less directly on the subject. Of these the most important, or at least one of the most carefully reported, is a case by Mendel, who published a paper in 1878 in the Berlin *Archiv fur Psychiatrie* on the Influence of Hereditary Syphilis in the Development of Mental Diseases, — apparently the only article specially devoted to the subject. In the case which was the subject of his observations the child, a girl, showed unmistakable symptoms of the disease at the age of two months, with various manifestations more or less directly traceable to it up to the age of nine, when the first signs of mental failure showed themselves, and she came to a stand-still in her school work; at the age of fifteen she had maniacal attacks, with delirium and hallucinations, soon followed by a condition of apathetic imbecility; finally, convulsions, affecting chiefly the right side, set in, and she died soon after at the age of eighteen. The autopsy showed a meningitis and other lesions which were believed to have had their origin in a syphilitic periostitis.

A study of the recorded observations authorizes the conclusion that mental failure in childhood may be the result of lesions produced by hereditary syphilis, and that hydrocephalus and other fœtal brain changes sometimes are the result of syphilis, and may lead on to idiocy.

Virchow says that the causes of congenital encephalitis and myelitis are the acute exanthemata and syphilis, and that when the disease does not kill it may often lead to paralysis in children and to many cases of idiocy.

Ireland, in his Idiocy and Imbecility, says that "idiocy does not seem to be a frequent consequence of hereditary syphilis, though I have met with a few apparent instances of the kind."

Maudsley, speaking of melancholia in children, regards inherited syphilis as in some instances the cause; "at any rate, beneficial results follow the treatment for hereditary syphilis."

Echeverria, remarking on the rarity of epilepsy from the inherited disease, briefly reports eight cases, of which six were more or less demented.

The author's own cases lead him to the conclusion that while hereditary syphilis is a more frequent factor in the production of mental disturbance than has been recognized, an explanation of the rarity with which it has been noticed is found in the following facts: —

That congenital deficiency of mind from the cause under consideration is probably rarer than mental failure coming on in childhood; that the time at which this mental failure usually shows itself, which is the period of the second dentition, is a time when the manifestations of hereditary syphilis are more or less latent.

In the recorded cases there is fair evidence that intelligence developed normally up to an age varying from five to nine years, and then became gradually weakened, and in three or four instances was utterly destroyed, so that they would more properly be considered under the heading of dementia rather than of idiocy.

The limited number of established facts does not permit general pathological conclusions, but the author quoted concludes, in substance, as follows: —

That the growth of the brain may be hindered by a thickening of the cranial bones as a result of syphilitic osteitis in early life.

That it may be hindered by thickened membranes, a chronic meningitis being often started by syphilitic periostitis.

That thickening and narrowing of the brain arteries, beginning usually as an inflammation of the inner coat of the vessels, are probably by far the most important causes of atrophy of the brain. To quote Heubner: "The blood, therefore, moves more slowly and with less tension in the net-work of the pia mater and in the brain capillaries. Oxygenation is diminished, and the nervous elements suffer a loss in their functional capacity. This effect, if the cause con-

tinues, can be no temporary one, and must show itself in symptoms of longer duration." Observations of Barlow, Heubner, and others show that syphilitic arteritis is met with in young infants, and may lead to complete occlusion in a child a few months old.

That atrophy of the large nerve cells of the convolutions is sometimes the result of sclerosis of the cortex, set up by some of the morbid processes above mentioned.

With the author whom we have quoted we can cherish the hope that by accurate observation on the subject we may be able to recognize the brain affections of hereditary syphilis at an early stage, when only can treatment be of avail.

THE WARREN TRIENNIAL PRIZE.

We wish to draw attention to the announcement in our advertising columns of the Warren Triennial Prize for 1886. The subject for the present year was Chronic Bright's Disease (parenchymatous and interstitial nephritis); The Nature and Mutual Relations of the Derangements in the Circulatory and Secretory Organs. No award, however, has been made. Beyond that fact we are not informed as to the character or number of articles presented for competition. It is to be supposed that the terms were too restricted to draw out any great number of articles. No complaint can possibly be made as to the narrowness of the subject for 1886. The terms of the competition are such as to give the widest latitude to literary or scientific medical men, the prize being offered for a dissertation on "some subject in physiology, surgery, or pathological anatomy."

The amount of the prize, $450, and the wide range of subjects, ought to bring out work of a high order of excellence. This is, we believe, the largest prize offered in this country for general competition, and the physicians and surgeons of the Massachusetts General Hospital are, *ex officio*, the committee who have the matter in charge.

SUICIDE MADE EASY.

A case of suicide occurred in Philadelphia last week which was of such a character as to merit notice, presenting, as it does, features interesting from their novelty at present, but liable to be of frequent occurrence in the future. It illustrates well the ease with which an individual intent on self-destruction can find its means in his daily surroundings. A man of thirty years, having no home, was admitted into the Episcopal Hospital on the 12th inst., where he died on Monday. While under treatment he was perfectly conscious and rational, and stated that he had bought a box of lucifer matches and had broken the tops off and eaten them; he did this for the purpose of terminating his existence, as he was tired of life. The clinical notes of this case have not been published, but a somewhat similar case was reported by Hans Hebra to the Society of Physicians, Vienna.[1] In this case, however, the matches were probably administered by some one else as a practical joke, but the result was fatal. The use of phosphorus in the making of matches, and in the various rat and insect pastes, and the facility with which it can be obtained, will probably make it ultimately a favorite poison in place of arsenic, which the public now understands is so very readily detected. Indeed, in the article just mentioned, Caspar is referred to as authority for the statement, that phosphorus "has become with us the most fashionable form of poisoning, and has already superseded all other poisoning." The principal appearances after death, in addition to luminosity of the stomach contents, are those of general fatty degeneration, and multiple capillary hæmorrhages, both superficial and in various organs, including the brain.

[1] Philadelphia Medical Times, September 23, 1882.

THE ONE HUNDRED AND SECOND ANNIVERSARY OF THE MASSACHUSETTS MEDICAL SOCIETY.

We print to-day the announcement of the annual meeting of the Massachusetts Medical Society, which all members of the Society have already received. The programme gives promise of papers of more than ordinary interest, and the place of meeting is changed to a portion of the city which may be supposed to possess a more congenial atmosphere. The annual exhibition, which has become a regular feature of the meetings, will be devoted to objects illustrating methods of plumbing, drainage, ventilation, etc., and will be of especial interest in itself, an interest which will undoubtedly be enhanced by Mr. Clark's paper on Plumbing Appliances, on Tuesday afternoon.

A visit to the new Medical School building ought to have been one of the attractions of the meeting, but the unfortunate fire of a few days ago will, we suppose, prevent the completion of the building.

The change of location will probably not rob the annual dinner of any of its usual attractions.

MEDICAL NOTES.

— At the annual meeting of the Suffolk District Medical Society, the following officers were elected: President, James C. White; Vice-President, George B. Shattuck; Secretary, H. C. Haven; Treasurer, E. M. Buckingham; Librarian, B. J. Jeffries; Commissioner of Trials, Charles W. Swan; District Nominating Committee, George C. Shattuck; Committee of Supervision, Benjamin S. Shaw, Samuel A. Green; Committee on Social Meetings, Calvin Stevens, George W. Gay, H. I. Bowditch, F. H. Brown; Censors, A. N. Blodgett, E. G. Cutler, T. M. Rotch, F. C. Shattuck, F. H. Williams; Councillors, S. L. Abbot, James Ayer, H. H. A. Beach, H. J. Bigelow, C. J. Blake, J. G. Blake, H. I. Bowditch, S. Cabot, D. W. Cheever, Hall Curtis, H. Derby, O. W. Doe, F. W. Draper, Thomas Dwight, C. Ellis, R. H. Fitz, C. F. Folsom, J. O. Green, S. A. Green, F. B. Greenough, W. H. H. Hastings, D. H. Hayden, R. M. Hodges, C. D.

Homans, John Homans, W. Ingalls, B. J. Jeffries, F. I. Knight, S. W. Langmaid, G. H. Lyman, F. Minot, C. B. Porter, John P. Reynolds, W. L. Richardson, G. C. Shattuck, B. S. Shaw, A. D. Sinclair, D. H. Storer, A. M. Sumner, C. W. Swan, G. G. Tarbell, O. F. Wadsworth, J. C. Warren, Thomas Waterman, James C. White, E. N. Whittier, W. G. Wheeler, H. W. Williams.

— The Providence daily papers are objecting to certain statements that have been made in the public press reflecting unfavorably on the health record of that city. From figures collected by a Providence contemporary we learn that the proportion of deaths to population, or rate of mortality, was very much less in Providence than in Boston or New York, in each of the last sixteen months, except November. The lowest rate in the whole time was 15.00 in each 1000 of the population in Providence, 21.10 in Boston, and 22.76 in New York. If the rate in Providence had been the same as the lowest rate in Boston, it would have given Providence 700 deaths more than the actual number. The highest annual rate of mortality in any month was 25.91 in each 1000 in Providence, 28.21 in Boston, and 42.18 in New York. If the highest rate in Providence had been the same as the highest rate in Boston, it would have given Providence 234 deaths more than the actual number. If it had been the same as in New York, it would have been equal to 1872 additional deaths in Providence. For the whole year 1882 the Boston rate of mortality would have given 468 deaths in Providence more than the actual number, and the New York rate would have given 1170 more.

— A remarkable instance of inherited moral obliquity, almost rivaling the classical case of the so-called "mother of criminals," is given by the *Journal of Inebriety:* "Two hundred years ago or more a noted pirate abandoned the sea and settled in the neighborhood of Boston. A numerous progeny came after him, all more or less criminal and drunken. In the third generation from the pirate there were sixteen inebriates. In the fourth generation, in the direct line, twenty-six members were punished for various offenses against the law and order, mostly for theft and forgery. In the fifth generation came the notorious Malborne Briggs, who at one time was in State prison with seven of his sons for various offenses. The sixth and seventh generations furnished a scattering crowd of criminals and inebriates, whose records are found in every penal institution of the State. The last representative, who turned State's evidence, seemed to have no consciousness of right or wrong, or moral responsibility, although possessed of considerable genius."

— M. Poncet, who is writing a series of Reminiscences of a Trip to North America in *Lyon Médical*, in which he gives many interesting observations from a medical and sociological point of view, remarks (April, 1883), "I have nowhere seen in Europe a finer outfit than that of the New York Hospital and the Boston City Hospital." After describing the former he says, "I will not insist on the usefulness of such an arrangement, of which I have already shown the advantages. It is sad to think that we are still considering as superfluous what other peoples rightly look at as common necessities. In this line we have everything to accomplish. If no country can compare with France in ease and comfort, it is nevertheless true that in relation to certain hygienic conditions we ought to imitate what is done elsewhere, and especially in America." His only criticism on this point is that some of the provisions at the New York Hospital, such as a conservatory, with aquarium, play-room, etc., for convalescent patients of various ages, are too elegant for a public charitable hospital.

— An exchange notes three deaths within a few months from and during the game of foot-ball as played under the "Rugby" rules. One was from heart disease, one from brain injury, and the last from injury to the spine. At the inquest in the latter case (at Liverpool, in April), the coroner said that he had seen "fractures of legs and arms, and dislocations without end, in the game of foot-ball." The spectators and umpires testified that the rules were strictly followed, and the victim himself said just before he died that nobody was to blame for his injury; that it was merely a misadventure incidental to the game. Besides these three deaths on the field there seems good reason to believe that the seeds of future disease have been often sown by the violent strain put upon the heart by the intense muscular and respiratory exertion involved in this pastime.

— Mrs. Lydia Pinkham, whose name and "astringent smile" are familiar to newspaper readers, died recently at her home in Lynn. She became partially paralyzed in January last. She has been an invalid for the greater portion of the intervening time. Mrs. Pinkham, it is said, was of Quaker parentage, and was born in Lynn, February 19, 1819. Her maiden name was Estes. She was educated at the Lynn academy, and taught school in Wenham in early life, subsequently marrying Isaac Pinkham. She commenced the manufacture of patent medicines about sixteen years ago, from a recipe left with her by a lady, and from humble beginnings her business grew until it aggregated more than $300,000 per year. Her newspaper advertising alone is claimed to have amounted to $180,000 per year. She possessed remarkable business tact, prudence, and energy. She was a believer in spiritualism. Her husband with a son and daughter survive her.

NEW YORK.

— The seventy-sixth annual commencement of the College of Physicians and Surgeons was held at Steinway Hall, May 15th. There were 125 graduates, and the president, Dr. Alonzo Clark, conferred the degrees and made a brief address. Among the prizes awarded were the Harsen prizes for proficiency, of $500, $300, and $200, to Charles H. May, Jacob H. Frankenburg, and Albert F. Burgman respectively, and the Cartwright prize of the Alumni Association, of $500, to Dr. Walter Mendelsohn, of the class of 1879. The principal address to the graduates was delivered by

Noah Porter, D. D., LL. D., president of Yale College, who said in the course of his remarks that instead of dreaming of success without effort and inquiring what his profession would do for him, it was better for the young physician to ask what he could do for his profession.

— A meeting of the citizens' committee of sixty was held May 16th, to receive and take action on the report of the sub-committee appointed the week previously to make a thorough investigation of the character of the Aqueduct Bill recently passed by the Legislature. The report stated that the bill was objectionable both on account of its unconstitutionality, so far as it relates to the naming of commissioners, and on account of its providing for an even number of members of the board, six; but mainly because it was unquestionably a political measure as regards the organization of the commission. The report also discussed the question whether the city would suffer materially by the postponement of the beginning of the construction of a new aqueduct for another year, and decided it in the negative. In accordance with the views expressed in this report it was unanimously resolved that in the opinion of the committee of sixty the bill now before the Governor ought to be vetoed by him, and that a committee of fifteen of their number should proceed to Albany to argue in favor of such veto.

— At the monthly meeting of the Charity Organization Society held May 13th, Dr. S. O. Vanderpoel was elected President, and Charles S. Fairchild, Esq., lately Attorney-general of the State, Vice-president, for the ensuing year. The Secretary, Mr. Charles D. Kellogg, reported that during the month of April one dispensary and thirteen churches had joined the list of coöperating charities, and that 3006 reports of cases were received.

— The excavating for the pedestal of the Bartholdi Statue of Liberty on Bedloe's Island in the harbor has been commenced, and the patients of the marine hospital there, which will have to be torn down to make room for the work, have been transferred to the Seaman's Retreat at Stapleton, Staten Island. The new buildings at Stapleton are much better adapted for hospital purposes than the old ones on the island, and Dr. Sawtelle, the physician in charge, expresses himself as much pleased with the change.

— At a meeting of the Society of Medical Jurisprudence and State Medicine, held May 10th, Charles H. Kitchell, Esq., of the New York bar, read a paper on Prison Sanitation.

PHILADELPHIA.

— The recent lectures to the police force on minor surgery and the first treatment of the wounded are already yielding good results. The men showed much interest in them, and a commendable emulation has sprung up with regard to the application of what they have learned. At least one man's life has been saved because the officer understood how to check arterial hæmorrhage, and in the cases that are brought to our hospital dispensaries the temporary dressings have been found carefully, and even admirably, applied. As such cases find their way into the daily papers, it makes others anxious to distinguish themselves, and thus the service is being greatly improved and made more efficient and humane.

— Of the twelve new resident physicians at the Philadelphia Hospital (Blockley) who obtained their places by competitive examination, one was Dr. Mary P. Root, who was recently graduated at the Women's Medical College. The examination which she passed is said to have been among the highest of those who came before the Board.

Correspondence.

A CASE OF PLEURISY.

Roxbury, *May* 14, 1883.

Mr. Editor, — Reading in the last Medical and Surgical Journal of a case of pleurisy with a large effusion (nine pints), reported by Dr. Darling, recalled to my mind a case I saw with Dr. Martin last fall, where we removed from a man's chest five quarts of clear fluid. The patient was a laborer, about forty years old, and when first seen complained of symptoms of a simple bronchitis. He was seen two days later, and, without having had any of the characteristic pleuritic pains, was suffering with great dyspnœa, and lying on his right side caused great distress. On examination his left chest was found completely dull, with the heart displaced to the right side. He was aspirated, and the above quantity of serum withdrawn, with great relief to him. He had no paroxysms of coughing at the time of the operation, and in a few minutes respiration could be heard over nearly all of the affected side. Yours truly,

Benjamin S. Blanchard, M. D.

Miscellany.

THE BERLIN POLYCLINIC.

We know no better way of fulfilling the wish of our correspondent than by printing his note exactly as it stands. It illustrates some of the difficulties of medical terminology.

Berlin, *den 4the of April*, 1883.

Dear Sir! — The physicians of the Berlin Policlinical Institution beg you in the interest of the colleagues, wich will visit the Berlin Hygienical Exhibition, to give notice in your most esteemed Journal of the following advice: —

"As a great many medical persons will visit the Hygienical Exhibition of Berlin, Pr., we will direct the attention to the Berlin Policlinical Institution, on which clinical lectures on Otolagy, Rhinoscopie, Dermatolagy, Syphilidalogy, Laryngoscopie, Neuropathology, Electrotherapie, Ophthalmolagy, etc., are hold regularly.

Every lecture commences the first of the month and dures thirty days.

The Berlin Policlinical Institution is situated: Louisenstrasse 51 opposite to the Hospital Charity."

Presenting you, dear Sir and colleague, my best respects, I remain

Your obedient servant ——— ———,
of the Berlin Policlinical Institution.

GLYCOSURIA WITH LOW SPECIFIC GRAVITY.

PROFESSOR CAMERON, in a note to the *Dublin Journal of Medical Science* (April, 1883), speaks of cases where he has found sugar in urine of a specific gravity of 1015, 1008, 1007, and even 1005. Some of these were merely temporary drops from an ordinary gravity of 1025 to 1035. There was no doubt as to the purity of these low specimens from any admixture with water after being passed. In the urine of 1005 there was a mere trace of urea, and the solids consisted nearly altogether of sugar and chloride of sodium. The writer gives an important caution as to applying the sugar test, as follows: —

"In examining urine it is always necessary to look for sugar, no matter whether the specific gravity of the fluid may be normal or otherwise. I occasionally find urine with a very high specific gravity, and with a, so to speak, diabetic appearance, to be quite free from sugar. On several occasions, in specimens of urine believed to contain sugar, I could not detect a trace of that substance. A few months ago I examined the urine of a man who had been treated for diabetes. The urine had a specific gravity of 1035, and, on being boiled with Fehling's solution, it gave a copious precipitate of cuprous oxide. There was something in the appearance of the precipitate, and in the slow way in which it made its appearance, that led me to suspect it was not produced by sugar. This proved to be the case, for on treating the urine with yeast no carbonic acid (save a mere trace) was evolved.

"The presence of large quantities of urates in urine causes a brown precipitate with Fehling's solution. The urates, even when abundant, do not always separate as the characteristic 'brick-dust.' I have found very large quantities of urate of ammonium in urine which remained clear on standing, but which gave a brown precipitate on being boiled with Fehling's solution.

"When testing for sugar in urine it is necessary to ascertain whether or not urates are present in large quantities. If they are they can be precipitated by the addition of hydrochloric acid, and the urine filtered or decanted from the precipitate can then be satisfactorily tested for sugar with Fehling's solution."

OBITUARY.

DOCTOR JEREMIAH JOSEPH MCCARTHY died at his home in the Charlestown District, February 25, 1883, in his thirty-seventh year, having struggled manfully against bodily ailments for over ten years, laboring all this time untiringly in the work of the profession he had chosen and loved.

He was the son of Major Charles McCarthy, who, inheriting an estate in Nova Scotia, first settled there before coming to Boston, where he became a well-known and respected citizen, a member of the City Council for many years, and was appointed by Governor Andrew paymaster for recruits with the rank of major.

Dr. McCarthy was born within six miles of Youghal, Munster, County of Cork, Ireland, and was little over a year old when his mother brought him to this country, his father having preceded them.

He was educated in the public schools, graduating from the Boston Latin School in 1865. He received the degree of M. D. from Harvard University in 1870, and shortly after began a most successful practice in Charlestown, and continued assiduously at work at his profession until within a few weeks of his decease.

His death was caused by phthisis pulmonalis, which he probably inherited from his father, who died from this disease at the age of forty. His health first gave way in 1872, owing to overwork in attending his midwifery practice, then already very large, and necessitated rest and change of climate, which he obtained by going to St. Paul, Minnesota, where he spent some fifteen months. Having recovered, as he thought, and with renewed health and strength, he took up his burden of work again.

He became a Fellow of the Massachusetts Medical Society in 1874.

He was modest, unassuming, and gentle in manner, conscientious in the discharge of his duties, a friend and benefactor to the poor, a faithful member of the church in which he had been brought up, a dutiful son to his widowed mother, a kind brother to his sister and brothers. As a practitioner of medicine he was skillful in diagnosis and successful in practice.

His sickness and death was a source of profound sorrow to a wide circle of friends and patients by whom he was greatly beloved. At the funeral services, which took place at St. Mary's Roman Catholic Church, a very large concourse of people without regard to sect or nationality were gathered to render the last act of respect and love for their lamented friend.

His life was an example of private and professional worth and integrity well worthy of imitation. F.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MAY 4, 1883, TO MAY 11, 1883.

FORWOOD, WM. H., major and surgeon. By direction of the Secretary of War, to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held at Cleveland, Ohio, June 5, 1883. Paragraph 10, S. O. 105, A. G. O., May 7, 1883.

SMITH, JOSEPH R., major and surgeon. By direction of the Secretary of War, to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held at Cleveland, Ohio, June 5, 1883. Paragraph 10, S. O. 105, A. G. O., May 7, 1883.

TILTON, HENRY R., major and surgeon. To be relieved from duty in the Department of the Missouri and assigned to duty in the Department of the East. Paragraph 13, S. O. 102, A. G. O., May 3, 1883.

BARTHOLF, JOHN H., captain and assistant surgeon. The extension of the leave of absence granted April 3, 1883, further extended four months. Paragraph 8, S. O. 105, A. G. O., May 7, 1883.

BYRNE, CHARLES B., captain and assistant surgeon. To be relieved from duty in the Department of the South and assigned to duty in the Department of the Missouri. Paragraph 12, S. O. 102, A. G. O., May 3, 1883.

PERLEY, HARRY O., captain and assistant surgeon. To be relieved from duty in the Department of the East and assigned to duty in the Department of Dakota. Paragraph 14, S. O. 102, A. G. O., May 3, 1883.

WORTHINGTON, JAMES C., captain and assistant surgeon. To be relieved from duty in the Department of the East and assigned to duty in the Department of the Missouri. Paragraph 14, S. O. 102, A. G. O., May 3, 1883.

BIART, VICTOR, first lieutenant and assistant surgeon. To be relieved from duty in the Department of the Missouri and assigned to duty in the Department of Dakota. Paragraph 13, S. O. 102, A. G. O., May 3, 1883.

MACAULEY, CARTER N. B., first lieutenant and assistant surgeon. To be relieved from duty in the Department of the East and assigned to duty in the Department of Dakota. Paragraph 12, S. O. 102, A. G. O., May 3, 1883.

CHARLES K. SAMS, hospital steward U. S. Army, discharged the service at Columbus Barracks, Ohio, April 20, 1883. S. O. 88, A. G. O., April 17, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE TWO WEEKS ENDING MAY 19, 1883.

DEARBORNE, F. M., surgeon. Granted six months' sick leave.

S. A. BROWN, passed assistant surgeon. Leave extended six months.

CORWIN, WILLIAM A., surgeon. Detached from the Receiving Ship Colorado, and granted sick leave for three months.

CRAWFORD, M. H., passed assistant surgeon. Detached from the U. S. S. Pinta and ordered to the Navy Yard, League Island, Penn.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 12, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Diarrhœal Diseases.
New York	1,206,590	668	245	19.95	20.10	3.60	4.80	2.70
Philadelphia	846,984	354	113	14.54	7.90	6.20	3.84	—
Brooklyn	566,689	235	73	13.63	11.50	1.28	5 54	2.13
Chicago	503,304	182	82	16.50	13.75	7.70	3.85	3.30
Boston	362,535	225	69	21.12	18.04	6.60	1.32	3.55
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	187	66	22.43	8.01	6.94	8.01	2.12
Cincinnati	255,708	107	40	18.69	14.02	3.74	4.67	2.80
New Orleans	216,140	144	45	32.43	3.45	—	—	7.59
District of Columbia	177,638	84	29	13.09	14.28	1.19	5.95	—
Pittsburg....(1883)	175,000	43	12	16.31	16.31	2.33	—	2.33
Buffalo	155,137	64	25	9.36	17.16	1.56	7.80	—
Milwaukee	115,578	57	37	22.75	14.00	8.75	5.25	3.50
Providence....(1883)	116,755	51	9	9.80	11.76	3.92	—	1.96
New Haven....(1883)	73,000	25	5	12.00	8.00	—	4.00	—
Charleston	49,999	29	11	6.90	13.80	—	—	6.90
Nashville	43,461	27	11	14.84	14.84	—	—	3.70
Lowell	59,485	28	7	14.28	10.71	3.57	3.57	—
Worcester	58,295	22	6	9.08	36.32	4.54	—	—
Cambridge	52,740	17	7	17.64	11.76	17.64	—	—
Fall River	49,006	18	6	5.55	22.22	—	—	—
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	10	3	10.00	10.00	—	—	—
Springfield	33,340	16	5	18.75	12.50	—	—	6.25
Salem	27,598	12	3	8.33	16.66	—	—	8.33
New Bedford	26,875	18	3	5.55	11.11	—	—	5.55
Somerville	24,985	11	3	—	9.09	—	—	—
Holyoke	21,851	12	9	25.00	33.33	8.33	—	—
Chelsea	21,785	10	3	40.00	10.00	—	—	—
Taunton	21,213	5	1	20.00	—	—	—	—
Gloucester	19,329	11	3	18.18	—	—	—	—
Haverhill	18,475	8	2	37.50	12.50	25.00	—	—
Newton	16,995	2	0	—	—	—	—	—
Brockton	13,608	4	0	25.00	—	—	—	—
Newburyport	13,537	3	1	—	—	—	—	—
Fitchburg	12,405	3	0	—	—	—	—	—
Malden	12,017	—	—	—	—	—	—	—
Nineteen Massachusetts towns	142,190	49	12	—	5.00	—	—	—

Deaths reported 2741 (no report from St. Louis): under five years of age 946: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 481, consumption 390, lung diseases 376, diphtheria and croup 112, scarlet fever 105, diarrhœal diseases 65, measles 47, small-pox 36, malarial fevers 27, cerebro-spinal meningitis 25, typhoid fever 24, puerperal fever 14, whooping-cough 11, erysipelas 11, typhus fever four. From *measles*, New York 23, Boston 10, Philadelphia five, Cincinnati and Chelsea two each, Brooklyn, Chicago, Nashville, Lynn, and Holyoke one each. From *small-pox*, New Orleans 30, Philadelphia three, Chicago, Baltimore, and Nashville one each. From *malarial fevers*, New York 14, New Orleans five, Brooklyn and Baltimore three each, District of Columbia two, Springfield one. From *cerebro-spinal meningitis*, New York nine, Baltimore three, Milwaukee and Lowell two each, Philadelphia, Chicago, Boston, Cincinnati, Worcester, Chelsea, Taunton, Haverhill, and Brockton one each. From *typhoid fever*, Philadelphia and Boston five each, New York and Pittsburg two each, Brooklyn, Baltimore, Cincinnati, District of Columbia, Milwaukee, Nashville, Fall River, Holyoke, Chelsea, and Gloucester one each. From *puerperal fever*, Boston, Cincinnati, and Pittsburg three each, Providence two, New York, Brooklyn, and Baltimore one each. From *whooping-cough*, Brooklyn four, New York three, Baltimore, District of Columbia, New Haven, and Springfield one each. From *erysipelas*, New York five, Brooklyn, Boston, Cincinnati, New Orleans, District of Columbia, and New Haven one each. From *typhus fever*, New York and Boston two each.

Five cases of small-pox were reported in Baltimore, Pittsburg five; diphtheria 39, scarlet fever 21, typhoid fever six in Boston; scarlet fever 25 and diphtheria eight in Milwaukee.

In 37 cities and towns of Massachusetts, with an estimated population of 1,039,809 (estimated population of the State 1,922 530), the total death rate for the week was 22.46 against 20.11 and 19.57, for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending April 28th, the death-rate was 22.7. Deaths reported 3758: acute diseases of the respiratory organs (London) 445, whooping-cough 89, measles 67, scarlet fever 61, fever 53, diarrhœa 43, diphtheria 23, small-pox (Leeds and Newcastle three each, Birmingham two, London one) nine. The death-rates ranged from 16.9 in Leicester to 32.9 in Oldham; Bristol 19.1; Leeds 20.3; London 21.6; Portsmouth 23; Sheffield 24; Birmingham 24.4; Derby 26.2; Liverpool 27.8; Manchester 30. In Edinburgh 19.7; Glasgow 34.7; Dublin 31.2.

For the week ending April 21st, in 170 German cities and towns, with an estimated population of 8,519,931, the death-rate was 28.4. Deaths reported 4646; under five years of age, 2076; consumption 751, lung diseases 704, diphtheria and croup 199, diarrhœal diseases 151, measles and rötheln 82, scarlet fever 62, whooping-cough 52, typhoid fever 37, puerperal fever 17, small-pox (Hanau two, Frankfort a. M. and Wiesbaden one each) four. The death-rates ranged from 15.6 in Liegnitz to 42.3 in Würzburg; Königsberg 30.4; Breslau 28.5; Munich 36.6; Dresden 26.7; Berlin 28; Leipzig 28.2; Hamburg 33.5; Cologne 27.6; Frankfort a. M. 20.6; Metz 18.6.

For the week ending April 21st, in the Swiss towns, there were 45 deaths from lung diseases, consumption 33, diphtheria and croup 11, diarrhœal diseases seven, measles five, whooping-cough three, typhoid fever three, small-pox one, scarlet fever one. The death-rates were, at Geneva 29.7, Zurich 16, Basle 14.3, Berne 42.9.

For the week ending April 28th, in the Swiss towns, there were 60 deaths from consumption, lung diseases 35, diarrhœal diseases 20, diphtheria and croup 14, measles 13, scarlet fever three, whooping-cough two. The death-rates were, at Geneva 22.6, Zurich 12, Basle 19.1, Berne 40.6.

The meteorological record for the week ending May 12th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
May, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 6	30.047	50	57	41	100	74	72	82	N	N	NW	13	8	7	O	O	C	—	—
Mon., 7	29.974	61	75	43	62	41	62	55	W	SW	SW	8	8	8	C	C	O	—	—
Tues., 8	29.856	65	79	54	60	32	48	47	SW	W	W	11	19	10	C	C	C	—	—
Wed., 9	30.192	52	60	47	62	61	63	62	W	W	S	5	4	4	O	O	F	—	—
Thurs., 10	30.113	49	55	45	71	71	100	81	SE	SE	SE	8	12	2	F	O	O	—	—
Fri., 11	29.940	56	62	46	83	100	66	83	NW	SE	W	3	7	7	O	R	F	—	—
Sat., 12	29.968	52	58	46	56	66	80	67	NW	SE	W	12	10	4	F	C	F	—	—
Means, the week.	30.013	55						68										6.10	.18

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; B., clearing.

MASSACHUSETTS MEDICAL SOCIETY.

ONE HUNDRED AND SECOND ANNIVERSARY.

THE annual meeting will be held at nine o'clock A. M., Wednesday, June 13, 1883, in Huntington Hall, at the Institute of Technology, Boylston Street (between Berkeley and Clarendon), Boston.

Tuesday, June 12, 1883. Twelve o'clock M. Meeting in Huntington Hall. Papers will be read as follows: (1.) A Contribution to the Study of the Tubercle-Bacillus, by H. C. Ernst, M. D., of Jamaica Plain. (2.) The Use and Abuse of Ergot, by G. L. Woods, M. D., of Springfield. (3.) The Use and Abuse of Ergot, by W. A. Dunn, M. D., of Boston. Adjournment at two o'clock.

Three o'clock P. M. (4.) Glykogen, by J. W. Warren, M. D., of Boston. (5.) Phlyctenular Disease of the Eyes, by O. F. Wadsworth, M. D., of Boston. (6.) Minor Injuries of the Spinal Cord, by B. H. Hartwell, M. D., of Ayer. (7.) Plumbing Appliances, by T. M. Clark, A. B., Professor of Architecture, Institute of Technology.

During Tuesday and Wednesday, at the Institute of Technology, there will be a Sanitary Exhibit, illustrating the proper and faulty methods of plumbing, drainage, ventilation, etc. This exhibit will be open to the public during the remainder of the week.

Wednesday, June 13, 1883. Nine o'clock A. M. The One Hundred and Second Annual Meeting. I. Secretary's Record and Report. II. Medical papers and communications: (8.) Recent Changes in the Method of Medical Instruction, by E. N. Whittier, M. D., of Boston. (9.) Neurasthenia: its Causes and its Home Treatment, by J. S. Greene, M. D., of Dorchester. (10.) The Artificial Feeding of Infants, by J. W. Spooner, M. D., of Hingham. (11.) The Early Symptoms of General Paralysis of the Insane, by W. B. Goldsmith, M. D., of Danvers. (12.) Communications from the Reporters of the District Societies. III. Introduction of Delegates. Intermission of fifteen minutes.

Twelve o'clock M. The Annual Discourse, by Amos H. Johnson, M. D., of Salem.

One o'clock P. M. The Annual Dinner will be served in the Skating Rink, on Clarendon Street, near Boylston, to which place the Fellows, called in the order of seniority, will walk in procession.

CONNECTICUT MEDICAL SOCIETY.

THE ninety-second Annual Meeting of the President and Fellows will be held at the Common Council Chamber, City Hall, Hartford, at three o'clock P. M., Wednesday, May 23, 1883. The Annual Convention (mass meeting) will be held at the same place, Thursday, May 24th, at nine A. M.

Annual Address, by the President, Dr. William G. Brownson, of New Canaan, The Country Doctor.

Dr. M. Henry, of New York, will, it is expected, offer a paper on the Treatment of Varicocele.

Essays: On some Points in Oral Surgery of Interest to the General Practitioner, Dr. George L. Parmele, of Hartford. Aspiration of the Chest in Pleurisy, Dr. W. H. Holmes, of Waterbury. Complications in Labor, Dr. F. N. Braman, of New London. Observations on some Cases of Knee-Joint Diseases, Dr. I. I. Berry. Inebriate Automatism, a Medico-Legal Study, Dr. T. D. Crothers, of Hartford.

BOOKS AND PAMPHLETS RECEIVED. — Students' Guide to Diseases of the Eye. By Edward Nettleship, F. R. C. S., Ophthalmic Surgeon to St. Thomas Hospital, etc. Second American from the Second Revised and Enlarged English Edition. With a Chapter on Examination for Color Perception by William Thomson, M. D. Philadelphia: Henry C. Lea's Son & Co. 1883.

Observations on Lithotomy, Lithotrity, and the Early Detection of Stone in the Bladder, with a Description of a New Method of Tapping the Bladder. By Reginald Harrison, F. R. C. S., Surgeon to the Liverpool Royal Infirmary, etc. London. 1883.

The Dangers of Impure Ice. Report to the Sanitary Protective Association of Newport, R. I., upon the Purity of the Ice Supply from Almy's Pond. By Professors Raphael Pumpelly, of the U. S. Geological Survey, William B. Hills, of Harvard University, and Dr. H. R. Storer. (Reprint.)

Johns Hopkins University Studies in Historical and Political Science. Herbert B. Adams, Editor. III. Local Government in Illinois. By Albert Shaw, A. B. (Reprint), and Local Government in Pennsylvania. By E. R. L. Gould, A. B. Read before the Pennsylvania Historical Society May 1, 1882. Baltimore, January, 1883.

Also V. Local Government in Michigan and the Northwest. Read before the American Social Science Association, September 7, 1882. By Edward W. Bemis, A. B. Baltimore: Published by the Johns Hopkins University. March, 1883.

The Percentage of College-Bred Men in theMedical Profession. A Paper read before the American Academy of Medicine, October 27, 1882. By Charles McIntyre, Jr., M. D., of Easton, Penn.

A Case of Hysterectomy with a New Clamp for the Removal of Large Uterine Tumors. By H. P. C. Wilson, M. D., of Baltimore, Gynæcologist to St. Vincent's Hospital, etc. (Reprint.) New York. 1883.

Twenty-Fifth Annual Report of the Washingtonian Home, located at 41 Waltham Street, Boston. 1883.

Cases of Mushroom Poisoning. By James D. Trask, M. D., of Astoria, N. Y. (Reprint.)

Report on the Pharmacopœias of all Nations. By Dr. James M. Flint, U. S. N. Extract from the Report of the Surgeon-General of the U. S. Navy for 1882. Washington. 1883.

Lectures on Cataract, its Causes, Varieties, and Treatment. Being Six Lectures delivered at the Westminster Hospital. By George Cowell, F. R. C. S. With Illustrations. London: Macmillan & Co. 1883.

The Best Method of Treating Operative Wounds. By Henry O. Marcy, A. M., M. D., Boston. Read before the American Academy of Medicine, Philadelphia, October 26, 1882.

The Rights of the Insane and their Enforcement. By Clark Bell, Esq., President of the Medico-Legal Society of New York. (Reprint.)

Proceedings of the Sanitary Council of the Mississippi Valley at its Fifth Annual Meeting, Jackson, Miss., April 3 and 4, 1883.

Original Articles.

CHANGE IN THE FORM OF INSANITY DURING ACUTE ATTACKS, OCCURRING IN YOUNG PERSONS. FOUR CASES.[1]

BY HENRY R. STEDMAN, M. D.,

First Assistant Physician Danvers Lunatic Hospital.

The peculiarities which called my attention to this group of cases were, first, the striking resemblance each bears to the others, although their course and manifestations exclude them from the ordinary forms of insanity. Second, the complete change of symptoms undergone in each case, resulting in two consecutive stages, both of which are far removed from the patient's normal state.

The inquiry how far they might form a class peculiar to the insanity of young people next occurred, but their chief value was found to lie in the means they afford for the study of and comparison with various other mental manifestations and diseases. I refer to such questions as the prognosis of attacks of acute melancholia, the hysterical element in mental disease, and, finally, the diagnosis and treatment of "moral" insanity. It is my intention merely to touch upon these points, and to indicate the course which further inquiry in these directions may profitably take.

Case I. is that of a girl of nineteen, who was admitted to the Danvers Lunatic Hospital December 2, 1880, with the following certificate of insanity: "Has delusions. Refuses to take nourishment or medicines. Is melancholic."

She was found to be a fairly well-nourished, pretty looking Irish girl. Face pale, expression indicative of profound dejection. Lungs and heart apparently normal. Appetite gone. Bowels inactive. Will not protrude tongue or make any voluntary exertion whatever. She stands in one place most of the time, only moving mechanically. Requires to be dressed and undressed by the attendant, to be led to and from the table, and will not eat without constant urging and even putting the food into her mouth. When addressed she usually makes no response, and, at most, her replies consist of a few disconnected words. She prefers to stand silent and motionless. Is evidently under the influence of some overpowering delusion.

Her previous history, as given by father, was as follows: Had a common school education. Possessed ordinary mental capacity before the attack. Was naturally cheerful and well-behaved, but of quiet and reserved disposition. Never insane before. Has a sister who is insane. Was quite well until three weeks before admission, when she went to her first party, where there was considerable excitement. After it she seemed ill, and "lost her speech" for three days. She then manifested great distress, declaring that she had never stolen, never lied, never had a child, etc., and constantly besought her parents to forgive her sins. She lost her appetite and suffered from wakefulness at first. Menses regular up to the week she was taken ill.

At the end of a month's stay in the hospital the patient had begun to take her food better, and appeared somewhat brighter, but was still extremely despondent and, at times, terrified. During the third month of her stay she showed increasing animation and activity, and was interesting herself in work on the ward. Her appetite had greatly improved, and she slept quite well. She was still despondent and took a gloomy view of her condition. From this time she began to emerge rapidly from her mental and bodily torpor, and a month later she had become busy, cheerful, and sociable. She referred freely to her past condition as an illness from which she had recovered, and recognized her delusions as such.

On March 21st (about four months after her admission) she was considered recovered, and was taken home by her mother. The change was deemed especially proper, as she had begun to display an undue freedom of manner and vivacity which her new surroundings were tending to increase, and which it was thought might cease in the quiet of home life.

On June 2d, or about two months later, the patient was again committed to the hospital, this time under widely different circumstances. Her parents had found it utterly impossible to control her on account of her determined recklessness and improper conduct. Her alteration in behavior and disposition was a source of constant astonishment and mortification to the family, as she had been a quiet and unobtrusive girl before her attack of insanity. She was now continually on the move. Would suddenly leave her work and visit some neighbor. Could not be induced to stay at home in the evening, but would walk about the neighborhood in an indiscreet manner, seeking men's society. On one occasion she ran off in her night-dress and wrapper to some resort where there were a number of men, who recognized her condition and sent her home.

It was noticed that during her menstrual periods she grew "heavy," and would sleep a good deal of the time. The physician's certificate reads: "No moral sense, is unruly and unreasonable, tending to dementia, nymphomania, and ungovernable passion for men's society." It was found on admission that a corresponding change had also taken place in her physical condition. She had gained greatly in flesh and strength, appeared to be in excellent bodily health, but rather heavy and coarse looking. Her manner was forward and pert. She would talk in a loud excitable way, denying accusations of misbehavior, and making a number of requests at once. She explained her conduct in a glib, plausible manner. She manifested no delusions or hallucinations of any sort, nor any evidence of the dementia referred to in the certificate. On the contrary she was bright and intelligent, both then and subsequently.

During most of her second stay at the hospital, which lasted five months, her condition was one of excitement and restlessness, attended with a perfect appreciation of her condition and surroundings, with complete self-abandonment to her impulses and whims. Owing to this lack of self-control she proved very intractable, but was always ready to promise good behavior. She was deceitful and unreliable, and fond of telling about the most private matters of her life, whether compromising or not. She was particularly anxious to attract attention, and would call out familiarly to strangers. In order to make all possible display she would frequently steal from other patients various articles of dress, persuading the more demented ones to give whatever pleased her fancy. Would secrete these things about her person, and when accused and

[1] Read before the Boston Society for Medical Observation, April 21, 1883.

cornered she would become noisy and defiant. Her attempts to set the patients against attendants and to get the latter into trouble were frequent and ingenious. She twice escaped from the hospital, and resisted violently when brought back. In order to make trouble for an attendant by whom she had been locked into her room, she tore to pieces her clothes and bedding and befouled the room.

During the last month or two she began to grow more quiet, steady, and undemonstrative, and her outbreaks ceased. She now went regularly to work in the laundry. Soon afterwards she expressed chagrin at her former conduct, and plainly showed a desire to do better. Finally, having become quiet, unobtrusive, and tractable, she was taken home much improved.

She continued to gain, and has now been at home a year and a half. Her father writes that she is well and at work all the time. Her appearance, on a recent visit to the asylum, was that of a modest, lady-like, and fairly intelligent girl.

CASE II. is so nearly like the one just described that an account of one might almost answer for both.

A. B., a Jewess, seventeen years old, was admitted to the hospital August 16, 1880. Never insane before. Two maternal aunts became insane and committed suicide by taking Paris green. The patient had always possessed good mental capacity, and was naturally quiet, reserved, and even shy in disposition, and little inclined to mix with other young people. Had no bad habits, so far as known. Had been regularly at work in a small millinery shop, and seemed as well as usual until less than two months before admission, when she returned from a visit in an unhappy state of mind for no adequate reason. She declared that things at home were changed and gone, though such was not the fact. Wept continually, and would only eat by persuasion. Her catamenia also failed to appear. The physicians' certificate stated that she was speechless, dull, and could not be induced to answer questions, and her mother said she had expressed the delusion that she (the mother) was dead, her brother in heaven, and that she wished herself dead.

Her condition on admission and for the first few weeks afterwards was the same. She never spoke, but stood gazing vacantly before her, utterly oblivious of her surroundings. She made no effort whatever, and was fed with difficulty. She neglected her bodily wants, requiring the care and attention of a young child. About two months later she spoke for the first time since admission, and from that day signs of increasing animation and interest appeared. That her depression was the outcome of delusion is shown by her subsequent statement, that while in this state she believed herself to be in another world and under the influence of some spell. It was not long before she had become cheerful and had discarded her delusions, but the change was attended by a certain flightiness and excitability quite foreign to her nature. She became unusually demonstrative, frivolous, and empty in her conversation, as well as emotional and restless. Hoping that life at home would have a tranquilizing effect, she left on a trial visit after seven months of hospital treatment. Three weeks later she was brought back, as she had proved uncontrollable, and vehemently opposed her mother's wishes when they conflicted with her own. She had been seemingly unable to keep still, much less to apply herself to any work, and was bent upon running about making visits, showing a forwardness and fondness for men's society entirely at variance with her natural modesty and shyness. At the hospital she soon reached a point where her condition was quite the opposite of the mute melancholy of the early part of her illness, so "loud" had she become in her talk and free in manner. Her endeavors to attract sympathy and attention were constant; she was never tired of arranging her toilet, and was kept uneasy by her insatiable desire for pleasure and excitement. She gave great trouble by her propensity to appropriate the ribbons and jewelry of others to her own use, and would not only stoutly deny the theft, but describe most circumstantially how the property had come to be her own. She would calmly tell the most deliberate and evident falsehoods, would feign a variety of illnesses, and on one or two occasions she became destructive in her vexation at the refusal of some request.

No delusion or mental inactivity were manifested during this stage. During the last few months of her year's stay in the hospital she began to grow quieter in every way, and to work upon her clothing, and when she left the hospital had become quite unobtrusive and circumspect, gentle and obedient. She has now been a year and a half at home, busily at work, it is said, at her former occupation, but further particulars cannot be gained.

CASE III., a young man, twenty-one years of age, was admitted to the hospital January 13, 1881. He was of ordinary mental capacity, and had a common school education. No known insanity among his relatives. His habits were temperate, and his moral character good. His domestic surroundings were comfortable and congenial. For a few months before admission he seemed somewhat melancholy, and was so anxious to keep busy that he would have worked in the shoe factory and on the farm late into the night if allowed. Three months before entering the hospital he began to pass restless nights, and to lose his appetite. Shortly afterwards he seemed suddenly to become additionally depressed and melancholy, being at first afraid that some one was going to shoot him, and that he must take leave of his family. His father had suspected him of masturbating for some time past.

The physicians' certificate reads: "Persistent melancholy. Refusal to take food or drink. Negligence in attending to natural calls, and at times great violence of action." When admitted he was in fair bodily condition, but seemed entirely demented. He would seldom answer a question, but sat in one place all the day, completely inert, and regardless of everything. When dressed or fed he would resist violently in a dogged, aimless way. He was exceedingly dirty, passing his evacuations in his bed or clothing, and otherwise neglecting his person. He continued in this state for several months.

During the months of May and June (six months later) he manifested more activity and appreciation of surroundings. Would talk quite sensibly at times. He had also become tidy and industrious, working most of the day on the hospital farm, although inclined to wander away. He still talked in a vague, unintelligent manner, but no delusions were detected. On August 2d he was discharged at his father's request. He had grown somewhat brighter, but still showed considerable mental inactivity.

On October 31, 1881, about three months later, he was recommitted on the following certificate: "Refuses to obey reasonable requests of parents, disposed to

make foolish trades. Wild expression in conversation, and extravagant notions."

There was, as stated, a remarkable change in his manner. He was loud, vulgar, and familiar. Not one of his former symptoms were present, but in their place others quite the reverse of them and of his natural conduct. He was mentally active, "knowing," and free from delusions. He was very fat and well nourished, and enjoyed remarkably good bodily health. He had not been two days in the hospital before he loosened the iron grate of his window at night, made a rope of his bed-clothes, and, lowering himself to the ground, escaped.

During this second stay, which lasted nearly nine months, the patient was always restless and excitable, with exalted ideas about himself. He spent much of his time writing letters to his parents filled with promises of reformation and good behavior. His conduct, notwithstanding these promises, continued to be very mischievous, and he was a source of uneasiness and discomfort to the ward by constantly plotting to escape, making others discontented, etc. He was quick to discover in others what was most likely to ruffle them, and delighted in taking advantage of it. He thought himself the handsomest man, best dancer, and most thorough good fellow in the house. He would write his father that he had left off using tobacco, and by the same mail send an order for cigars and similar things. Was fond of using low phrases, and thought their use implied a certain smartness.

During the spring months his behavior became somewhat better, and he was put to work with the gardener. Here his loud boasts rendered him ridiculous and disagreeable, but after a time he became less troublesome. At no time did he seem to realize how foolishly he made himself appear. At the last he worked quite steadily under the promise of returning home if he behaved himself, and to some extent he left off swearing and boasting, though he still indulged in much "loud talk." Was very well nourished, and in apparently vigorous bodily health when discharged in the following June.

He has now been at home ten months giving, his father says, no trouble, and seeming to be in better condition than ever before. His mother writes, "Since his return from the hospital he has worked on the farm steadily, and has seemed interested in his work. He is contented to remain at home all the time. He seems active and bright in most respects, but in conversation will ask questions about events long past, the same questions that he has heard answered a great many times. When he has done a day's work he is willing to stop, while before his attack he would have liked to work far into the night."

Case IV. was treated at Danvers while I was absent, and I am indebted to my colleague, Dr. Gorton, for the facts.

The patient, a traveling salesman, twenty-one years old, and unmarried, was admitted to the Danvers Asylum March 13, 1882. The account of his physical condition mentions no disease with the exception of a gonorrhœa of six months' standing. Knee jerk normal. Pupils equal and responsive. Articulation and gait unimpaired. Tongue firm. No evidence of syphilis. His mental condition on admission is thus described: "Much exhilarated in manner, intelligent and bright, and quite willing to talk about himself. Memory good. Manifests no delusions whatever. Laughs at and denies most of the statements made in the commitment and by his father, which are as follows: —

Physicians' certificate: "Has a homicidal tendency in that he has threatened and attempted bodily harm to members of his family. Imagines himself an extensive liquor dealer, with which business he has nothing to do. Obtains all the money he can from every source, theft and otherwise, and spends it recklessly. Loss of memory; excitable, unreasonable; cross and crabbed to his family; filthy in his habits. Has completely lost all former refinement of manner. Seems to be utterly devoid of all sense of right and wrong."

Previous history (given by father): Patient is a Protestant, of good mental capacity. Educated at a high school. Naturally of a cheerful and lively disposition. For the past three years has been somewhat intemperate, but for the last nine months is said to have drunk little. Never insane before present attack. Two cousins of father insane. No other insanity or neurosis in family. In April, 1881, one year before admission, he had a sharp attack of parotitis, which was complicated by severe orchitis. He made a slow and tedious recovery, not being able to resume his business until September, 1881. Soon after the parotitis the patient was much depressed, and secluded himself from society. He refused to eat because he thought the food too expensive. He did not want to wear clothing for the same reason. He thought his parents would be ruined, and would go to the poor-house. He shut himself into his room, refusing to come out until forcibly removed. This condition of depression and melancholy lasted about a month. Gradually he became cheerful, and finally extremely vivacious and gay. Since returning to his business he has been extravagant in his ideas, has purchased unnecessary and expensive clothing, and of late has been very irregular in all his acts, appropriating other people's property, trying to make it appear that he is in possession of large amounts of money, while really he is without anything, etc., etc. Has been very headstrong, threatening to shoot his mother if she would not accede to his wishes, besides making threats of violence to others. Family noticed no impairment of memory. Has slept well, and has had a good appetite.

May 15th. Since admission the patient has been very "queer" in conduct, but has shown more malice than positive insanity in his acts. He has written numerous letters to his family, most of them being of a vulgar, obscene, and threatening character. He has also written to his former companions letters showing great erotic excitement, but revealing nothing in the way of specific delusions. In the ward he has delighted in making trouble for the attendants; has made several attempts to escape, and has incited others to do the same. Lately he has been at work with the farmer, doing cheerfully hard manual labor, and has kept his promise of not trying to run away. His conduct since admission may be briefly described as that of a man lacking in *morale*, and reckless in the extreme. Has gained much in flesh, and presents the appearance of perfect physical health. His parents having secured a position for him on board a sailing vessel, he is to-day removed after a stay of two months in the hospital.

A letter received from his mother a few months ago states that he left his ship at San Francisco, wrote home for money, and nothing has since been heard from him

These cases of insanity, three of which are undoubtedly hereditary, are each characterized by a period of depression varying from six months to a few weeks, and attended with more or less profound intellectual disturbance, manifested by delusions, melancholia, and even dementia. This first stage, if we may call it such, is followed by a longer one, the reverse of that just described. It is marked by an excitement which shows itself in disorder of the feelings and conduct, with more or less complete abandonment of self-control, but unattended with delusions or other sign of intellectual impairment. On the contrary, the intellectual activity is noticeably on the alert, but exercised in a wrong direction. Finally, the patients, with one exception, appear to have returned to their original mental state after a gradual subsidence of the excitement.

It would have been easy to have mistaken either of these stages for one of the ordinary typical forms of insanity if no opportunity had been given to follow the development of the cases from beginning to end. In other words, the period of depression without its sequel would have been pronounced an attack of melancholia or dementia, according to the case considered. In fact, the first case reported was discharged as recovered from an attack of acute melancholia, there being no indication of such an unusual termination as actually occurred. So, too, with the period of excitement. The perversion of moral feelings in these patients was remarked as similar to an extent varying according to the case as that exhibited by another patient in the hospital, who was considered a case of "moral insanity," one in which there had been no previous history of melancholia.

I have frequently noticed that the process of convalescence from an attack of acute melancholia or dementia — and we have both of these forms illustrated here — does not follow the usual course from depression by very gradual steps, with an occasional relapse, to recovery without some intervening excitement. This is generally mild in character, and goes no farther than a certain childish exhilaration, instability, and constant uneasiness. We should, therefore, be on our guard lest this condition become aggravated and terminate in the outrageous conduct and intractability which our cases plainly show to be possible. This fact does not seem to be sufficiently recognized in the text-books. Maudsley, in his Pathology of the Mind, speaks — at more length than many others — of four possible issues of acute melancholia, and recognizes the possibility of the supervention of excitement and extreme elation, but considers it of bad omen, the patient becoming, if not actually maniacal, speedily depressed after the subsidence of the excitement.

Now, on turning to the period of excitement exhibited by these patients, the persistence and pronounced character of its manifestations is most noticeable. In fact, were it not for the pure insanity of the early stage, about which no question of mere depravity or self-will can be reasonably entertained, the depressed condition would seem to be of secondary importance. Moreover, it will be seen that the period of excitement was out of all proportion to that of depression as to its duration as well. In the last case especially, the early stage consisted only of an attack of delusional melancholia of three weeks' standing, but it was followed by a protracted, and perhaps permanent, period of perversion of the moral powers, with outrageous and unusual conduct. The characteristics of the form of excitement manifested in these patients must occur to all. I refer to the absence of incoherence as well as of the aimless conduct of acute mania and the freedom from any actual delusion. In short, there is nothing in the excitement alone which differs from that of so-called "moral insanity," which Dr. Blandford terms the insanity of the young. Total want of moral feeling and principle, but yet considerable intelligence, ingenuity, and plausibility; absence of shame or remorse when reproved for vices; constant unreliability and utterly incorrigible conduct; a complete change from the natural behavior. These are the chief points in the description of such cases generally, and I am sure that those just reported fulfill these conditions, excluding, of course, the early symptoms. Dr. Blandford regards it as "quite certain that various patients are undoubtedly insane who present none of the ordinary delusions of insanity." "They may not," he says, "have reached the stage of delusions, and they may go on to recovery without ever reaching it, *or they may recover from the stage of delusions and yet not perfectly recover, remaining in a chronic state of what Dr. Pritchard calls moral insanity.*" May not our cases come into the last category?

This brings us to another important consideration, namely, the necessity of close inquiry into all cases of "moral insanity," or of all cases in which bad conduct is the chief element. The alteration in a person's natural feeling, manner, and conduct is sometimes an exceedingly difficult matter to settle satisfactorily, the parent's opinion and that of the patients' intimates being perhaps quite opposite ones, while a well-authenticated attack of depression, even of short duration, would go far toward confirming the diagnosis of insanity. I have a case in mind which hinged on this point, namely, the precise facts regarding a period of depression.

However, lest I be accused of generalizing too hastily, I refer you to the well-known and now thoroughly established type of insanity called *folie circulaire* or *folie à double forme*, to which our cases bear a striking resemblance so far as the single attack goes. This is described by Falvet as a species characterized by a prolonged succession of periods of maniacal excitement and periods of melancholic depression, usually alternating in a regular manner, . . . their alternate recurrence being constant and pathognomonic. In describing in detail the periods of depression and excitement in these attacks he says of the latter that "its most usual characteristic consists in the disorder of the emotions and actions much more than that of the purely intellectual faculties. So in many respects it has been confounded with what has been described under the names of moral insanity, insanity of action, impulsive mania, reasoning mania, etc." Facts such as these point, I think, directly to the natural occurrence of a period of depression in some connection with insanity of the so-called non-intellectual type, and go to strengthen the opinion as to its great value in the diagnosis of cases with that class of symptoms.

The presence of a hysterical element in these cases will be noticed, especially in the second. Here, too, there seem to be good grounds for caution in diagnosis. The age of the patient, the uterine irregularity, the perverted will, the increased emotional activity, the groundless complaints of illness, craving for attention and sympathy, all well-known features of hysteria

as commonly manifested, were present in this case and to a less degree in that of the other girl. Opposed to these symptoms, however, are the facts of the patient's robust health, the absence of paroxysm and of marked peculiarities of sensation and motion, the futility of restraint or coercion, and, above all, the preceding depression, with delusions, from which this condition seemed to have arisen.

Throughout the class of patients who inherit neuropathic temperaments there is a gradual evolution, as it were, of certain of the forms of mental impairment ranging from an enervation of will down to complete loss of self-control. The amount of this inherited nervous instability may be sufficient in one case to produce only a mild form of hysteria, while in another moral insanity may be the result, especially in young people. Now between the extremes come the doubtful or mixed cases, rendered additionally difficult of diagnosis by the absence of delusions. In our cases the room for doubt in this matter is small, but one often hears of similar cases of a less clear variety in which there has been considerable uncertainty whether aggravated hysteria or moral insanity is to be dealt with. The possibility of recovery or of improvement in the former without the stigma attached to treatment in an asylum calls for the closest inquiry into the personal and family history of these doubtful cases before yielding to the temptation of a speedy commitment. Dr. Savage says: "We have (at Bethlehem) such cases exhibiting every variety of mental symptoms. One will refuse to walk without crutches, another will insist on being fed, one will remain always like a well-dressed doll expecting to be noticed, but occupying herself with nothing but self-complacent retrospection. One will eat rubbish, another will read with the book upside down. Many such cases find their way into asylums, by a sad misfortune, I think."

Now as to prognosis. The return to and continuance in natural bodily and mental soundness made by three of these cases after most protracted excitement points to similar occasional results in "moral insanity." Recovery is most likely to take place where the hereditary taint is slight, and where the hysterical element is prominent.

In regard to treatment the cases teach us to take into consideration the likelihood of extreme change following depression, especially in the young, and to combat the premature removal of such patients from asylum care and treatment.

Little or no benefit can come from home treatment in extreme and decided cases of moral perversion due to insanity. It is wise for the physician, before committing the patient, to fortify himself with facts gathered from several sources, to insure an accurate certificate, for in these cases of insanity more than in all others an intimate knowledge of all the facts and their intelligent statement will go far toward securing the confidence of the relatives and the comfort and proper treatment of the patient in the asylum. It may also prevent any future embarrassment to the physician from the complaints and accusations of such patients. In the asylum a course of judicious neglect has been found to be best suited to such cases.

— Coffee as a vehicle for quinia is again advocated by a writer in the *Lancet*. It has been shown that the taste of the drug is thus disguised only because its solubility is diminished.

PUERPERAL FEVER, PROPHYLAXIS IN HOSPITAL PRACTICE, NOTES ON THE LYING-IN HOSPITALS OF VIENNA, DRESDEN, AND PRAGUE.

BY F. H. LOMBARD, M. D.

AMONG the advances made by obstetric science in the last twenty years, the recognition of the true nature of so-called "puerperal fever" and the discovery of means for preventing its appearance and dissemination are worthy of emphatic mention.

However varied and antagonistic the views held by distinguished leaders of the English, French, and German schools have been in the past, the accepted opinion of to-day is that this much-dreaded disease in all its varied forms, and with widely-differing manifestations, material is in every case due to the absorption of septic which has been introduced either from without (external infection) or from within (self-infection).

To Semmelweis is due the credit of having discovered (1847) the real cause of "puerperal fever," and his book [1] embodying the result of the most careful observations while physician in the lying-in hospitals at Vienna and Pesth is to-day, after years of contention, accepted as the highest authority on this much disputed question.

The parts exposed to absorption are the internal surface of the uterus, which, as proved by Friedländer's investigations,[2] is during labor deprived of its epithelium, and for at least three weeks after delivery presents a raw, wounded surface; further, the cervical and vaginal walls, the external genitals, and the perinæum, whenever the surfaces of these are abraded.

In a vast majority of cases the infection is brought from without by the examining finger, catheter, sponge, bed-linen, etc., impregnated with organic material, from any source whatsoever, in a state of decomposition. Self-infection may take place through the absorption of portions of the placenta or membranes, of coagula, or of lochial discharges, which retained in utero have undergone decomposition; also through soft parts, which from pressure during prolonged or instrumental labor have become necrosed.

No stronger proof can be brought in support of the correctness of this view of the ætiology of "puerperal fever" than the marked decrease in the mortality of lying-in women which has followed wherever it has been accepted and appropriate prophylactic measures against the dreaded disease have been strenuously carried out.

In the hope that it will not be without interest to the readers of the JOURNAL to review briefly the progress made in this direction in some of the lying-in hospitals of the Continent, the writer has collected the following facts from notes taken during his residence in the hospitals at Vienna, Dresden, and Prague: —

For the ten years (1812–1822) previous to the introduction of anatomico-pathological studies in Vienna, the rate of deaths from puerperal fever in the lying-in hospital was 1.8 per cent. During the year 1823, when medical students for the first time were obliged to dissect and to make post-mortem examinations, the mortality from puerperal fever rose with a leap to 7.5 per cent., and from that time until 1847, when Semmelweis intro-

[1] Die Ætiologie, der Begriff und die Prophylaxis des Kindbettfiebers. Pesth. Wien und Leipzig, 1861.

[2] Carl Friedländer. Physiolog-Anatomische Untersuchungen über den Uterus. Leipzig.

duced his rules for disinfecting hands, instruments, etc. with calcium hypochloricum, the death-rate never fell below 2.2 per cent.; it averaged for these forty-five years 6.2 per cent., and in 1842 reached the formidable height of fifteen per cent., every sixth or seventh woman confined dying from puerperal fever.

The introduction of disinfectants brought the death-rate for 1848 again down to 1.3 per cent., and since that time it has never risen above two per cent., except during the interval from 1852 to 1857, when disinfection was for the time abandoned (its efficacy being questioned), and, significantly enough, the death-rate rose again as high as nine per cent.

In 1865 carbolic acid was introduced, and from that time to the present antiseptic precautions have been observed with constantly increasing vigilance, and with correspondingly gratifying results. With an average of more than 10,000 births a year the mortality from puerperal fever for the last five years in the Vienna Lying-in Hospital has been under 0.75 per cent.

At Prague the results are not less striking. For the ten years (1865–1875) previous to the building of the new hospital the death-rate from puerperal fever averaged 6.67 per cent. per annum; maximum 11.6 per cent.; minimum 3.08 per cent.

Since the completion of the new hospital, which is a masterpiece in its hygienic arrangements, and since the introduction of antiseptic precautions rigidly observed, the number of deaths has decreased in the following remarkable ratio: —

Date.	Delivered.	Died.	Died, 1 in	Per cent. Deaths.
1876	2627	30	87.6	1.14
1877	2704	34	79.5	1.26
1878	2776	45	61.7	1.68
1879	3010	11	273.7	0.36
1880	2813	13	216.4	0.46
1881	2927	7	418.1	0.24
1882	2963	7	423.3	0.24

The general statement has been made that these strikingly favorable results have been gradually attained through the advance made in the observance of antiseptic precautions. It remains to inquire more closely into the nature of these precautions as they are to-day observed in the hospitals under consideration.

They are briefly as follows; —

The free use of soap and the nail-brush with a four per cent. solution of carbolic acid *before* and *after* every vaginal examination by physician, midwife, or student. [In Carl Braun's wards a one-tenth per cent. solution of permanganate of potassa is also used for disinfecting the hands.]

Each patient has her own urinal, bed-pan, catheter, and nozzle for vaginal and intra-uterine douche, the last two being kept constantly under a four per cent. solution of carbolic acid.

No student who has had charge of a patient with a temperature over 39° C. is allowed to examine another patient for twenty-four hours. (In Dresden he is excluded from the lying-in room for from eight to fourteen days.)

All instruments for use during or after labor are kept under a four per cent. solution of carbolic acid.

When for any reason the hand or any instrument has been introduced into the uterus to assist labor, or whenever there is, after delivery, a foul, stinking discharge as from retained placenta or membranes, decomposed coagula or the like, the cavity of the uterus is washed out with a solution of carbolic acid (two to four per cent.) until this comes away clear. Further, in Vienna in all such cases a bougie containing pulv. iodoform five grammes (rubbed up with equal parts of powdered gum arabic and starch with sufficient glycerine to give the right consistence) is introduced into the uterus.

If the douche alone is used it is repeated every twelve or twenty-four hours, according to the severity of the case. If the double treatment is employed it is repeated once in thirty-six hours, until all untoward symptoms have disappeared.[1]

The same treatment is carried out in the vagina whenever its walls have been subjected to injury or to unusual pressure, as from instrumental delivery or protracted second stage.

In Prague, where extraordinary precautions are taken, a carbolic vaginal douche is given immediately before and after every delivery, and every visible rent in the vaginal mucous membrane or about the vulva is at once united with silk.

The writer has seen no less than forty stitches taken to unite rents in the vaginal walls of a primipara after protracted labor.

Ruptures of the perinæum, of whatever extent, are also united with silk kept submerged in a solution of corrosive sublimate 1 to 1,000; the edges of the wound are sprinkled with powered iodoform, and a bit of iodoform gauze is tucked into the vulva to protect the wound from the discharges. The knees are tied together, no special diet is ordered, and the patient is not disturbed until the fourth day, when the stitches are removed. Results excellent.

In from one to two hours after delivery, unless specially contra-indicated, the patient is lifted on to a stretcher and carried to a fresh bed in one of the convalescent rooms.

In the Prague Hospital these rooms all face the south, are spacious, admirably ventilated, and contain only five beds each.

The cloths which catch the discharges are constantly renewed, and the genitals are kept clean solely by irrigation, nothing but carbolized water being allowed to approach the vulva.

If "puerperal" ulcers appear in the vaginal walls or upon the external genitals, they are treated locally as follows: —

Superficial ulcerations and wounds which have not healed by first intention are sprinkled with pulv. iodoform.

Ulcers with suppurating or diphtheritic bases are covered with a wad of salicylic cotton soaked in a one per cent. solution of calcium hypochloricum, to which a few drops of spts. camphor have been added; changed every two hours.

Necrosed or gangrenous parts that cannot be removed are, after irrigation with carbolic, kept covered with a wad of salicylic cotton soaked in a solution of corrosive sublimate 1 to 1,000.[2]

In Dresden tr. chloride of iron is largely applied.

If a case of puerperal fever in spite of the above precautions occurs in one of the wards no attempt is made to isolate the patient. In other words, the at-

[1] No case of iodoform poisoning has yet occurred.

[2] According to Koch's investigations this solution has a germ-destroying power which is only possessed by carbolic acid of the strength of at least ten per cent. It is, therefore, the most powerful antiseptic that can be employed.

mosphere, as a carrier of the germs of puerperal infection, is believed to play an insignificant rôle.

It is no uncommon occurrence to see a patient with the severest form of puerperal fever lying between two others in the same ward who will pass through a perfectly normal convalescence after their confinement; and Winckel makes the statement, corroborated by experience,[1] that the spreading of the most severe form of puerperal fever in large lying-in hospitals can be stopped within a few days solely by the careful disinfection of all instruments and the exclusion of all nurses and others who examined the affected patients before they were attacked, without necessitating the closing of the hospital, more strenuous ventilation, or the opening of new wards.

The mortality among lying-in women in private practice, calculated from extensive statistics recorded in various cities of England and the Continent, is stated to be between six and seven in every thousand.

Comparing these figures with those of the Lying-In Hospital in Prague, quoted above, we find that for the last four years in this hospital the mortality has averaged 3.25 in every 1000.

From these and the foregoing statistics we are led to make the following deductions: —

In properly constructed lying-in hospitals, where appropriate precautions are strenuously observed, the mortality can be kept within as favorable limits as in private practice; and, further, such hospitals can be thrown open for the purposes of medical instruction without prejudice to the patients.

The "puerperal fever" of private practice is identical with that met with in hospitals, and its occurrence and dissemination are only to be avoided by the observance of the same precautions.

Finally, whatever views one may hold upon the subject of antiseptics in general, and whether one prefers to attribute such results as the foregoing to the germ-destroying properties of carbolic and kindred substances, or merely to the increased care and cleanliness which these bring in their train, the fact remains that under no other system have such satisfactory results been obtained, and this of itself should be sufficient reason for continuing to employ the same until something better is devised.

Strassburg, *April* 30th.

YEARLY REPORT ON DENTISTRY.

BY WILLIAM HERBERT ROLLINS.

EDUCATION.

The importance of a regular medical education for those who practice upon the teeth is steadily gaining ground. In the East the conservative element has as yet proved too strong for any advance in this direction, but in several of the Western medical schools oral professorships have been established.

This step marks the most important advance which has ever been made in dental education. To those who desire to practice upon the teeth it is of vital consequence. To the student of general medicine its value is great, as heretofore he has not received adequate instruction about the teeth and their diseases.

ANATOMY.

There is no particularly new material in this department. Dr. Bödecker states that a continuous net-work of protoplasm traverses not only the tubuli of the dentine, but also the side branches, which are simply anastomosing canals between the larger tubes. This protoplasmic net-work on the one hand is continued into the enamel, and on the other into the cement. This idea has never before been so clearly demonstrated, though it was taught at the Harvard school several years ago.

Contrary to the opinion held by Darwin, of a correlation between the growth of hair and teeth, a young girl now on exhibition in London as "the missing link," has, though covered with hair, a normal dentition.

A curious absence of teeth has been reported in the *Dental Cosmos*, March, 1883. The patient, a male forty-eight years old, was one of a family of eighteen. None of the other children were edentulous, though in several the teeth were partly absent. The family history showed a maternal grandmother and an uncle, both edentulous. The patient has eight children, some of whom have less than the normal number, but none are entirely without teeth.

DISEASES OF THE TEETH.

Caries. — No new theory has been brought forward.

Mayr, in the *New England Journal* for January, 1883, states that the acid theory of decay is untenable, because if acids were the cause of the solution of the lime salts we ought to find in the cavity lime salts in combination with the acids which are supposed to cause decay, that is, lactic, acetic, tartaric, citric, etc.

He does not find such salts present; on the contrary, in the deep layers of decay, which we may suppose are best suited for examination, he finds the lime salts but little changed in amount, and still combined, as in a normal tooth, with phosphoric and carbonic acids.

Increased attention has been given to the inflammatory theory. One objection to this is that it fails to account for the decay which always takes place in pulpless teeth.

The germ theory, as a scientific observation, may be said to date from Leber and Rottenstein, the results of whose investigations were translated by Dr. Chandler in 1873. This theory has attracted much attention. Miller, in *Dental Cosmos*, January, 1883, states as the results of his investigations that the first stage of caries is the extraction of the lime salts by acids produced by fermentation within the mouth; the softened tissue then becomes the abode of enormous numbers of fungi. Septothrix threads are found in the superficial layers, bacilli penetrate far into the tissue, while micrococci are found up to the junction of the sound dentine. He divides caries into three stages: Decalcification, infection of the softened dentine, and putrefaction of the organic matter of the invaded tissue.

DENTAL PULP.

Very little has been added to our knowledge of the diseases of the dental pulp since the publication of the investigations of Wedl. During the year the subject has been studied by Dr. Bödecker.[2]

ALVEOLAR ABSCESS.

No new methods of treatment have been proposed. The one most in favor is to inject through the root canal. When this cannot be done to fill perfectly and

[1] Pathologie und Therapie des Wochenbettes, s. 354.

[2] Cosmos, June, 1882.

inject into the abscess from the gum Magitot advises extraction and replantation. Though regarded as an extreme measure in America it certainly in many cases is successful.

GRAFTING.

In France considerable attention has been given to this by David.[1] He divides the subject into (1) transposition, — grafting in the same mouth; (2) transplantation, — grafting from one mouth to another; (3) reemplantation when the tooth is put back into its own socket.

The statement is made that a living pulp reunites, and consequently the grafted tooth is not pulpless.

FILLING TEETH.

The use of non-cohesive gold has received increased attention. The advantages claimed for it are, rapidity of manipulation, a more perfect contact with the tooth, less risk of renewed decay from leakage caused by the expansion and contraction of a solid plug of cohesive gold.

A new filling material, consisting of a hydraulic cement mixed with gutta percha, has been introduced. The idea of using a hydraulic cement is not new, but its combination with gutta-percha is.

Asbestos as a filling for root canals has been tried and found of value.

The use of varnishes as a lining for cavities has extended. Enamel fillings for conspicuous cavities are to be recommended.

A new form of tin, with which cohesive fillings can be made, has been introduced.

A year's additional use of the oxyphosphate has shown that they can only be considered as temporary fillings, for which purpose they are of more value than the oxychlorides, because less irritating to the dental pulp.

Experiments have been made during the past year and the two previous ones in attempting to deposit a coherent layer of lime in a cavity as a means of filling teeth. Into water highly charged with carbonic acid under heavy pressure limestone in small pieces was placed, and allowed to remain for several months; the solution was then driven in a fine stream into a cavity in a tooth. A coherent layer was not obtained, but as the experiment was the imitation of a common natural process it seems as if it were a practical one. It is, therefore, desirable that others should take up the investigation.

Experiments have been made to determine the cause of discoloration of gold fillings. Though not yet completed they seem to show that iron from the wear of the instruments is not the only cause, as instruments made by the American Iridium Company of iridium did not prevent discoloration in all cases. Such instruments are of value, however, as obviating one of the causes of discolored fillings.

Several new amalgams have been brought forward, the claim being made that they did not discolor. Experiments have shown that this claim was unfounded.

INSTRUMENTS FOR FILLING.

A practical electric engine has been invented. Its chief advantage is the rapidity with which the instrument revolves, there being about six thousand revolutions a minute. With this engine and a long, hollow, cylindrical knife it is possible to cut into the cheek an inch to reach an abscess without giving more than slight pain. As rapidly revolving knives cut with but little pain they might be used in general surgery as explorers and for slight operations without ether. A small cylindrical knife, about one millimetre internal diameter, will remove a core of tissue from which sections for microscopic examination can easily be made.

[1] Le Progrès Dentaire, January, 1883.

METHODS OF ILLUMINATION.

Several forms of stomatoscope have been introduced. Swan has attacked the problem of lighting the mouth by electricity, and lamps of his have been shown before the London Odontological Society.

Though such a method of illumination would be of great value, a serious obstacle to its introduction would be the absence of a suitable source of electricity. The use of any battery as a source of a constant current is not practiced except for very limited periods, because the power declines so rapidly, nor can secondary batteries be utilized at present for this purpose.

THE LABORATORY.

The noble metals as bases for artificial teeth are gaining ground. The introduction of small yet practical gas furnaces for continuous gum has extended the use of this valuable method. For those who cannot model teeth from the soft base this offers the most practical method of making natural looking dentures, because each tooth being separate from its fellows there is greater opportunity for placing them in more suitable position than is possible with block teeth.

One of the obstacles to the general production of teeth modeled from the soft base has been the inconvenience of the vitrifying process, a large furnace being required to get the intense heat necessary. Several years ago a small furnace was perfected in which this could be done with gas as a fuel, but it has never been generally introduced, probably because a blast of air was required which necessitated a small amount of motive power, which is rarely present in the laboratory. The importance of making casts of every patient's teeth where it is possible to do so cannot be overestimated. It would be an admirable idea if one of the makers of dental supplies would put such a series of casts within the reach of members of the profession as guides in modeling artificial teeth.

Another point which might well be carried out is the photographing of the patient before the natural teeth are removed. This has been done, and is found to be a great help in producing a natural expression in carving the teeth. We so rarely see artificial teeth which are not a deformity that almost any one must admit this demands more skill than is usually possessed by the dentist, and therefore indicates the importance of a better training in this branch of a dentist's education. No one without a certain amount of artistic skill can ever make artificial teeth in harmony with the face. To acquire the skill demands a special training of the eye and hand, which those having charge of dental education have overlooked. This omission should be remedied by making a certain amount of artistic training an essential part of a dental curriculum.

— The local application of a solution of salycilate of soda in acute rheumatism is said to produce marked relief of the affected joints.

Hospital Practice and Clinical Memoranda.

SPINAL CARIES. ABSCESS DISCHARGING THROUGH INTESTINE. CLOSURE OF INTESTINAL OPENING. DEATH FROM BURSTING OF ABSCESS INTO PERITONEAL CAVITY.

BY H. L. BURRELL, M. D.

IDA L., aged four, was first seen February 18, 1882. Diagnosis, caries of the eleventh and twelfth dorsal vertebræ of four months' standing. A plaster-of-Paris jacket was applied, but was soon removed, as it was found the child was failing.

She was placed upon a "Bradford frame," which immobilized her and yet allowed her to be carried about. The patient was kept upon this frame, with the exception of one day in November, 1882, when the parents "exercised the child's spine" by the direction of an irregular practitioner. A severe attack of abdominal pain convinced the parents of the necessity for the frame.

On July 12, 1882, pus was noticed in the dejection; this flow of pus continued, varying in quantity, until three weeks before the child's death, when it suddenly ceased. From this time the patient rapidly failed.

On February 22, 1883, a painless, fluctuating swelling the size of an egg was discovered just above the anterior third of the crest of the right ilium. February 25th the child suddenly complained of intense abdominal pain, and became collapsed. A few hours later the swelling over the crest of the ilium had disappeared, and a slough the size of a three-cent piece had begun to form over its site.

The child died twenty-eight and a half hours later, never having rallied sufficiently to justify any surgical interference.

While the child was being arranged by the undertaker the small slough gave way, and an estimated discharge of a quart of pus took place.

THE SWALLOWING OF A SILVER HALF-DOLLAR. DEATH.

REPORTED BY C. E. WEBSTER, STUDENT OF MEDICINE.

A YOUNG man about twenty years of age lost a silver half dollar while throwing it up and catching it in his mouth. He looked for it about the room, but failing to find it, and feeling a sensation in his throat, concluded that he must have swallowed it. On trying to eat he experienced difficulty in swallowing, which was much less after one or two attempts. For several days he ate only soft food, swallowing with difficulty. After that he took his usual diet. He consulted a doctor, who gave him an emetic, and another who twice passed a probang. The latter assured him that the coin must have passed into the stomach, and that the sensation which still persisted was simply the result of irritation.

Nineteen days after the accident he had an attack of hiccough while at dinner. After this the sensation of pressure in the throat was less. He grew pale and thin. He slept little, and could rest only with his head high. He was very nervous, and after about two days complained of feeling very tired. He then had repeated attacks of hæmatemesis, became unconscious, and died twenty-two days after losing the coin.

I give the following notes of the autopsy from the memorandum of Dr. D. S. Burr: —

BINGHAMTON, N. Y., *July* 19, 1879.

"Stomach normal, filled with black blood clotted. Upper part of small intestine normal, and filled with black grumous blood. Œsophagus: posterior to commencement of descending aorta the coin was found, with two small perforations into the descending aorta. The coin was a silver half-dollar, and presented the flat sides toward the back and front."

The peculiar features in the case are: first, the point of lodgment. The coin appears to have been moving with sufficient force to pass the constriction at the level of the cricoid cartilage and yet to have been too large to reach the cardiac orifice. Secondly, the transverse position in a vertical plane which with the backward curve of the œsophagus might enable the probang to pass in front of it without the operator feeling any obstruction. At any rate it did not present a serious obstacle to the passage of food. Third, the absence of any extensive inflammation. The only discoverable lesion being the small ulcerations into the aorta, through which the patient slowly bled to death, hæmorrhage probably beginning at the time of the attack of hiccough three days before death.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.

C. M. JONES, SECRETARY.

APRIL 2, 1883. DR. BROWN presided.

DR. H. R. STEDMAN read the regular paper on

CHANGES IN THE FORM OF INSANITY DURING ACUTE ATTACKS OCCURRING IN YOUNG PEOPLE. FOUR CASES.[1]

DR. C. F. FOLSOM said that certain changes in the type of insanity, for instance, from a condition of mental depression to one of exhilaration or excitement and conversely, are not very uncommon, and that all forms of mental disease differ somewhat from the commonly observed standard when affecting boys and girls during the period of adolescence, from about the age of sixteen to twenty-two in males and a little earlier in females. Cases similar to those reported occur in private practice, but it is unusual for them to be of so pronounced a character as to require commitment to an asylum. *Folie raisonnante* is used by some writers, and he thought with propriety, to indicate a symptom of a mental condition which is quite marked in the so-called moral insanity, common in simple mania, *folie circulaire*, the early stage of certain forms of general paralysis of the insane, and often observed in most of the mental diseases at some stage in their progress. *Folie raisonnante* may be used by different persons to express almost every degree of impaired mental function or disordered action, whereas an individual's character and surroundings frequently explain a great deal of unusual conduct when there is no positive evidence of mental disease. He thought that great care should be used to

[1] See page 505 of this number of the JOURNAL.

discriminate between strange behavior which is physiological and that which is pathological, or at least to reserve an opinion until all the facts of the case are known. The medico-legal bearing of this point has been well illustrated of late in the Guiteau trial, during which every physician who formed a positive opinion as to the assassin's mental condition was obliged to do so from a partial and insufficient view of the case. The histories related by Dr. Stedman throw a great deal of light upon an obscure subject.

DR. GOLDSMITH. The four cases reported are of a kind that possesses interest from several points of view. The ætiology of three of them showed hereditary predisposition, and my experience with others of like character has led me to believe that a hereditary taint is somewhat unusually frequent in adolescents suffering from the symptoms described, though the ancestors more often have a history of a nervous system generally weak and imperfectly organized rather than of positive insanity.

The onset of mental symptoms at the sudden suppression of the menstrual flow in the case of the girl after attending her first party points to the prominence which disorders of the sexual functions often assume in the causation of insanity in the young. I have seen a young man similarly affected in whose case the removal of a long and tight prepuce, which had kept the glans penis in an exquisitely sensitive and irritable condition, was attended with very striking relief of the mental symptoms. I have also seen like good results follow the application of proper spectacles in the case of an astigmatic girl whose form of insanity was of this type, but in whom the hysterical element mentioned by Dr. Stedman was somewhat prominent. The proportion of cases in which these so-called reflex causes are operative is undoubtedly small, but it is sufficiently large to emphasize the great importance of an examination to determine whether they exist in all young persons suffering from mental symptoms, and it is particularly desirable that no time be lost in such cases, because mental symptoms occurring during the period of rapid development preceding maturity are likely to damage the subsequent character and capacity of the individual in proportion to the length of time they interfere with such development. The order of sequence of the stages of depression and excitement in the four cases described is not the common one, and, in my experience, is rarely found except in quite young patients. It is common enough to learn of a stage of depression preceding almost any form of acute insanity, but it usually does not pass the physiological limit so as to be recognized as disease by friends. In the cases described the melancholia and stupor were profound and fully as obvious evidence of insanity as the subsequent elation and excitement. Indeed no insane delusions were shown in this later period, and an examination, particularly if made to determine the responsibility for a criminal act, might easily have failed to disclose evidences of insanity to an expert; and this illustrates, as has been said by the reader and by Dr. Folsom, how important the history of a decided change of mental condition is in determining whether certain irregularities of conduct are due to immorality or disease. The difficulties of treating these patients anywhere are usually very great. During the period of depression they can be treated very well at home, if the condition is appreciated by the physician and the friends are moderately judicious, which is not often the case. During the excitement the custodial care of a hospital is necessary for most cases, but it is very difficult to carry out the treatment which their condition indicates. You have a patient in robust physical health, irritable, excitable, and restless, who ought to have a great deal of physical exercise every day in quiet surroundings, but who is often averse to that, and so determined to escape that you are forced to a repression of his activity, which is contra-indicated. I advised the father of one of the patients described by Dr. Stedman to have his son ship before the mast, the captain of the vessel being a reliable man and knowing his condition, because I was unable to give him sufficient exercise out-of-doors and prevent his escape from the hospital.

The history of these patients also shows that a confident prognosis for the immediate future even cannot be made at once on the subsidence of mental symptoms, as all reached what was apparently about the normal mental condition in the transition stage between the states of mental depression and excitement, and one was discharged as recovered at that time.

DR. J. J. PUTNAM referred to the fact that poverty of the nervous system had been mentioned as a hereditary cause, and asked for more precise information in regard to the peculiarities of the ancestral nervous organizations in these cases. Were the parents likely to be distinctly neuropathic or merely in a bad state of physical depression and anæmia? Would neurasthenia arising from overwork or insufficient food be apt to eventuate in insanity in the offspring?

DR. STEDMAN could give no particular disease as tending to this result. The typical condition is often recognized in a family as a weak nervous system manifesting itself in hysteria and various kindred disturbances. Overwork or lack of food on the part of parents would not probably tend to produce such outbreaks in children.

DR. FOLSOM suggested that it might depend largely on accident or be the result of neurotic tendencies. If a single person otherwise healthy has had an attack of insanity and recovered there is no reason why he should not marry unless there is a general taint. His offspring are not likely to suffer. But the existence of the neuroses, of hysteria, or habitual drunkenness, give a stronger tendency than an actual attack of insanity to the development of insanity in the offspring. And an examination of these points affords the most important indications for prognosis.

In response to an inquiry by Dr. Ingalls, DR. STEDMAN said that in his cases sleep was good. The insomnia of acute mania was entirely wanting. In fact, their physical condition throughout was excellent, and all their normal functions were well performed.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

THURSDAY EVENING, MAY 10, 1883. Vice-President, F. P. HENRY, in the chair.

TYMPANIC CARIES PRODUCING SUB-DURAL ABSCESS OPENING INTO LATERAL SINUS.

Neil D., aged eighteen, was admitted into Professor Agnew's ward in the Pennsylvania Hospital with the following history: When he was five years of age he had measles, and since that time he has had suppura-

tion of the right middle ear. It discharged at intervals. Two weeks previous to admission he had acute pain in his right ear, and a week later it began discharging. He had severe headache ever since he was first attacked. The pain was situated principally towards the front, but existed also towards the sides of the head. The discharge was profuse and offensive; he was emaciated; his face was haggard, pale, with a slightly yellowish tinge; he had an anxious expression of countenance, and altogether looked very bad. His mother says that this change occurred entirely during the two weeks prior to admission. The ear was cleansed and astringents applied; the discharge ceased in about six days. Bromide of potash failed to relieve the headache, but morphia, hypodermically, gave temporary relief. He held his neck stiff, with the head slightly drawn back. This increased as the disease progressed. He had nausea, and later vomited large quantities of greenish-black fluid. Three days after entrance the pains extended down the spine and into the legs and to the under side of the arms. On the fifth day after his admission the headache and pains in the lower extremities were very severe. The discharge had almost ceased. His temperature rose to 102.5° F. An ice cap afforded no relief. On the eighth day he died.

	Temperature.		Pulse.	
Date.	Morning.	Evening.	Morning.	Evening.
9[1]	100°	103°	62	86
10	101.5	101.5	70	96
11	98.5	102.4	66	80
12	99.5	100.8	68	84
13	102	102.5	84	88
14	102	105.4	100	102
15	103.5	102.5	106	104
16	101.6	102	136	114
17	99	100	112	108

[1] Day of entrance.

His bowels moved regularly; they were not constipated.

Post-mortem examination made twenty hours after death. Skull was very thin at all points. Dura mater apparently normal. Marked congestion of the arachnoid and pia mater, more so on the right side. No evidences of thickening or other disease. Brain normal. No excessive cerebro-spinal fluid.

Region of Right Ear. Beneath the dura mater covering the petrous portion of the right temporal bone over the middle and internal ear there was an abscess about an inch long. It communicated by a small opening with the tympanum. At its opposite extremity it opened into the lateral sinus. This was filled with pus from the point of opening to within two inches of the torcular Herophili. These two inches were filled with a soft black clot. Below the point of opening to the jugular foramen there was thick pus and a partly decolorized clot much firmer than the one extending in the direction of the torcular Herophili.

Remarks. The congestion was active, not passive. It was most marked on the surface of the brain. The large veins were not distended, and there was consequently no excess of fluid. The patient's mind was clear to the last. The most marked feature of the case was the emaciation, which was very rapid. An interesting point in connection with the case is the cause of death. It seems to have been due to the entrance of pus into the circulation; in other words, it was probably a case of true pyæmia. He had two marked symptoms of pyæmia, the sallow countenance and the rapid emaciation; besides these he had the vomiting. He never had the slightest chill or the sudden rise and fall of temperature, both so marked in cases of pyæmia. Sweet breath and any external abscesses or lung affection were also absent. I was unable to examine the other organs.

Specimens (Lungs, Heart, and Kidneys) from a Case of Bright's Disease.

Presented by Dr. Frederick P. Henry.

The organs upon the table were taken from a typical case of chronic parenchymatous nephritis. The kidneys are slightly enlarged, extremely pale, with marked arborescent vascularity of the surface, and with non-adherent capsules. In fact, they represent one of those instances in which the gross appearance suffices for diagnosis. The heart is slightly enlarged, its left ventricle dilated, its walls fatty, and its valves competent. This heart gave rise to no murmur strictly so called, but did produce in typical degree the sound called by Bouilland and Potain the *bruit-de-galop*. Potain considers this sound to be diagnostic of interstitial nephritis, but, for my part, I have invariably encountered it in cases of Bright's disease in which the parenchymatous affection was predominant. The lungs are congested and œdematous throughout. The pleuræ is greatly thickened on both sides, and the pleural cavities abolished, with the exception of the diaphragmatic portion of the right side, which contains a small amount of fluid in the shape of a number of serum-containing loculi. The cause of death was œdema of the lung, and the interesting question arises as to whether œdema of the lungs, which is so common an event in cases of Bright's disease, may not be favored by the obliteration of the pleural cavity also commonly present in these cases; or, in other words, and conversely, whether the pleural cavity may not serve as an outlet for effusions which, but for its presence, would infiltrate the lung parenchyma. Although my attention has not been specially directed to the point which I have just raised, and therefore I have no cases other than that just reported to bring forward in its support I think I can state, in general terms, that before œdema of the lungs occurs, in cases with open pleural cavity, that cavity contains a considerable quantity of fluid; that is to say, that its capacity to act as a drain to the lung tissue is exhausted, and it does not at all follow that, for this result to be produced, the pleural sac should be *distended* with fluid. In fact it would seem that a moderate amount of fluid in the pleural sac may be sufficient to exhaust this conservative power, and this amount varies with the state of the pulmonary circulation. The view just advanced is in complete harmony with what we know of the physiological function of lymph spaces, among which the large serous sacs are reckoned. The last volume of our Transactions[1] contains a paper upon pleural effusions, in which I argued at considerable length that any course which interfered with a proper expansion of the thorax would lead to congestion of the pulmonary capillaries, thereby favoring pleural effusion. The results of capillary congestion vary in different systemic conditions. In Bright's disease, owing to the altered state of the blood, the result is œdema, that is,

[1] Volume ——.

a serous infiltration of lymph spaces. Effusion into the serous investment of organs such as the lungs and heart is conservative so far as concerns the parenchyma of these organs. The practical result of these considerations is that œdema of the lung, in cases of Bright's disease, is favored by pleuritic adhesion, and, secondly, that œdema of the lung may perhaps be averted by the timely performance of paracentesis.

MYXOMATOUS TUMOR OF THE SUBCUTANEOUS CELLULAR TISSUE OF THE CHEST.

Presented by DR. MACCONNELL.

The specimen was removed by Dr. Allis at the Jefferson Hospital clinic one week ago. The patient was a man aged sixty-three years, who stated that six years ago he had been struck on the side of the chest by a box at a spot corresponding to the site of the tumor. The growth commenced shortly after this traumatism, and at the time of the operation was of the size of a pecan nut. The microscopical appearances were somewhat the same as those presented by the specimen presented for him by Dr. Nancrede in December, 1882. The present specimen very beautifully illustrates the transitional stages of the fœtal development of blood-vessels, such as budding, etc. Abundant yellow elastic tissue is also seen. The cells are but faintly stained with picrocarmine, owing to the highly refractive substance of the growth (mucin), rendering the coloring of the nucleus indistinct. Dr. MacConnell thought that the apparent rarity of similar growths was due to the use of alcohol for hardening purposes. If such a reagent be used, only the appearances of a young connective tissue growth will be detected.

FIFTH ANNUAL CONGRESS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

HELD AT THE HALL OF THE ACADEMY OF MEDICINE, NEW YORK, MAY 21, 22, AND 23, 1883.

FIRST DAY, MAY 21ST. MORNING SESSION.

The President, DR. GEORGE M. LEFFERTS, of New York, called the meeting to order, and made an address of welcome, in which he congratulated the Association upon its prosperity and the status of the present Congress, which thirty-seven of the forty-eight Fellows had signified their intention of attending. He reviewed the past history of the Society, enumerating the number of papers presented at each of the previous meetings, and stated that never before had so many essays been offered. There were no less than twenty-three of these, or within one of fifty per centum of the whole membership of the body. He was opposed, he said, to increasing the membership at present prescribed by the by-laws, in order that admittance to the Association might be considered a high honor to be striven for. He would, however, make the suggestion, although not without some hesitation, of lopping away useless branches from the parent trunk, and he thought it was not more than fair that the few drones that were in the hive should give place to those who were anxious and worthy to assume the active duties of fellowship. Dr. Lefferts then read a paper entitled

NEW FACTS IN LARYNGOLOGY,

in the course of which he related two remarkable cases of nervous affection of the larynx, and which was discussed by DRS. ELSBERG, KNIGHT, MAJOR, JOHNSTON, and INGALS. In bringing the discussion to a close he said that he was now inclined to agree with these gentlemen that the trouble he had described was one of the various auræ of epilepsy, commencing in the larynx. The subject was a comparatively new one in laryngology, and he thought it afforded a wide field for future investigation and study, which he would commend to the further consideration of those present.

The second paper, by DR. S. W. LANGMAID, of Boston, was entitled

A COMMON FORM OF VOCAL DISABILITY RESULTING FROM PATHOLOGICAL PROCESSES. THE PHENOMENA USED TO DEMONSTRATE THE FALSITY OF ONE SYSTEM OF VOICE TRAINING.

The trouble referred to was inability to sing above a certain note of the scale, or, in the case of actors, a sudden break of voice at a certain point in the upward inflection, while the voice was usually good enough in the conversational register. The chief point of interest in connection with it was, that the laryngeal examination made it possible for one to say at exactly what note the voice would fail, and through what portion of the scale it was possible to use it. This knowledge might be of consequence, inasmuch as a modification of the music to be sung or a change of inflection in recitation might sometimes enable a singer or actor to get through a performance without breaking down. It might also be of service in warning the patient to desist from using the voice until the disability was removed. The cause of the affection, which was one peculiar to the most powerful voices, was generally fatigue of the vocal organ by unusual efforts. The laryngeal appearances showed either slight injection of one or both vocal cords or possibly none at all; but the position of the cords was that of relaxation when the note upon which the break occurred was attempted. The glottis fissure might be simply elliptical, or, as more generally happened, open throughout its whole extent, the vocal processes receding more or less from each other.

The general laryngeal image was the well-known one of vocal fatigue, and the paresis was of the sphincter muscles of the glottis, including the tensors of the cords. The only fact to which it was desired to call attention was, that in typical cases nothing unusual was noticed when the patient was made to sing successively the notes of the scale from below upwards until a certain note was reached (the ninth for high voices and the seventh for low ones), and that then the change in the position of the cords, which was different from what was to be expected, was well marked. Instead of the progressive closure of the glottis, especially of the posterior portion, a sudden relaxation was seen to take place; the cords receding, the vibrations appearing to be slight, and the resulting tone being without resonance and of falsetto quality.

The degree of the scale upon which this occurred was the point at which the so-called change of register took place in the normal voice, and one common erroneous method of teachers consisted in the substitution of the falsetto production at the note of the scale mentioned. This specious error of relaxing tension was a pitfall into which both teacher and pupil were apt to fall. The treatment of this condition of paresis of the vocal muscles belonged in part to the

laryngologist, but mostly to the teacher. The paper was discussed by Drs. Daly, Major, and others.

Before adjournment the Nominating and Auditing Committees were appointed by the chair, and Drs. John M. Mackenzie, of Baltimore, Md., and G. W. Chamberlain, of Hartford, Conn., were elected Fellows of the Association.

AFTERNOON SESSION.

The first paper was on

THE DESTRUCTION OF NASAL POLYPI BY CHROMIC ACID,

by Dr. Frank Donaldson, of Baltimore. What was desired in getting rid of nasal polypi, he said, was prompt and rapid removal with as little pain and hæmorrhage as possible, and in such a way as to prevent recurrence. He then reviewed the various methods in vogue, with their advantages and disadvantages, and stated that specialists were now more inclined to the use of the écraseur in some form. If the snare alone were employed, however, the growth almost invariably returned, and hence Morell Mackenzie and others were in the practice of removing a portion of the turbinated bones in addition to the tumor. With the galvano-cautery there was less hæmorrhage, but in burning out the insertion by this means it was difficult to avoid injuring more tissue than was desirable. Caustics had in a great measure been abandoned because their destructive qualities were not limited to the neoplasm to be removed, but he had found strong chromic acid free from the objections to which most chemical agents of this class were open. Its action was that of a solvent of animal tissue, and it rapidly lost one half its oxygen and became an inert sesquioxide. At the same time it was antiseptic and disinfectant, while it was ten times stronger than carbolic acid, fifteen times stronger than nitric acid, and twenty times stronger than bichloride of mercury. Its action was prompt, and it gave rise to less pain than any other caustic. His manner of using it was to first moisten the mucous surface with lead lotion, and then apply the acid on a glass rod introduced into the polyp. Its affinity for organic matter was so great that it acted immediately, and the growth could then be readily removed by means of forceps without pain and without hæmorrhage. If the whole growth did not come away the view of the parts was not obscured by blood, and the remaining part could be removed by a second application. After the removal of polypi by the snare, it was also a safe and efficient escharotic if one were desired, and it was not his purpose to recommend chromic acid to the exclusion of other surgical means.

Dr. Jarvis was of the opinion that these gelatinous polypi did not, as a rule, recur from their old bases, but that formation of new tissue occurred by reason of small embryonic polypi remaining in the vicinity. He was led to take this view by a case (which he related) in which, in addition to a large one, a number of these small growths were found. Chromic acid, he believed, prevented the development of these.

Dr. Duncan had found that nasal polypi, no matter what method was employed for their removal, were exceedingly apt to recur unless a portion of the turbinated bones, in accordance with the practice of Dr. Morell Mackenzie, were removed in addition.

Dr. Seiler said that the gelatinoid polypus was a localized hypertrophy of the mucous membrane, which had undergone myxomatous degeneration, and that he agreed with Dr. Jarvis as to the origin of the new growth after their removal. He preferred the wire écraseur tightened very slowly.

Dr. Frederick I. Knight, of Boston, read a paper on

CHOREA LARYNGIS,

the object of which, he said, was to call attention to the different kinds of cases which had been grouped under this designation. Choreaic disturbance of the larynx was in all probability only one of the local manifestations of a general affection of the nervous system, the precise character of which had not as yet been satisfactorily determined. Three varieties had been reported. The first involved the action both of the adductor muscles of the larynx and the expiratory muscles of the chest. It was characterized by the emission of a barking or crowing sound, and the paroxysms sometimes occurred at a particular hour of the day, although they were more apt to come on at irregular intervals several times during the same day. It was found, as a rule, in children, the age varying from eight to fourteen. It was characterized by no structural lesion, and only a slight congestion of the larynx was seen.

The second class was that in which the laryngeal muscles alone were affected, and the only case that had as yet been published was that reported by him at the past meeting of the American Laryngological Association. It involved only the hyo-thyroid muscles. He had now to report a well-marked case affecting the adductors of the larynx alone. The patient was a single woman, forty-two years of age. There was tonic spasm of the muscles, and the vocal cords were driven together with such violence that he could hear them strike. When she was lying down the patient said there was a most unpleasant "ticking in the head," and he ascertained that it was due to this cause. The choreaic affection continued during sleep. This was a unique case, and he believed the trouble to be due to a functional central cause. It differed from ordinary chorea in continuing during sleep, and in its rythmical character. Usually choreaic movements ceased altogether during sleep or else continued only to such a limited extent as could be accounted for on the hypothesis of dreaming, and were also exceedingly irregular, although both Charcot and Say recognized a rhythmic form of chorea in occasional instances. In this case arsenic and quinine were taken until their physiological effects were evident without producing any modification of the affection.

The third class, which, indeed, ought not properly to come under this designation at all, was that in which the expiratory muscles alone were affected (the laryngeal adductors not being concerned), and the only case of it known was one reported by Chiarri, which was narrated. The prognosis was favorable, as a rule, and the treatment that which was appropriate to other forms of chorea.

The next paper was by Dr. E. Fletcher Ingals, of Chicago, on

THE TREATMENT OF LARYNGEAL PHTHISIS,

in which he remarked that the chances of the patient were about as good without treatment as with it unless there were harassing cough or difficulty of deglutition,

when local treatment was of very great service. In speaking of different applications which he had employed, he said that he had never noticed any changes in the parts affected under the use of iodoform, while some of the other agents which he had used had produced a marked local effect. The most important element in the treatment was time, which gave an opportunity for a prolonged series of suitable applications, and climate was also a factor to be taken into consideration if possible. At the conclusion of the paper DR. W. C. JARVIS read one on

THE HEALING OF ULCERS IN LARYNGEAL PHTHISIS,

in the course of which he exhibited a convenient apparatus, supplied with a mirror to show their position, for making applications of powders to the ulcers.

In the discussion which followed the papers DR. JOHNSTON related a case of apparent cure from laryngeal phthisis in which the local treatment consisted of a weak solution of sulphate of zinc and carbolic acid, applied by means of the steam atomizer.

DR. DONALDSON thought that a great deal of relief could be afforded not only by soothing applications, but also by iodoform and the antiseptic spray. It was of the utmost importance that the patient should receive sufficient nourishment, and in order that this might be accomplished it was sometimes advisable to introduce food by means of the tube of a stomach pump. A patient whose case had been given up five years ago as entirely hopeless, but who had then been nourished for a time in this way, had improved in the most remarkable manner, and two years later he had written him from the West that he was quite well again.

The discussion was further continued by DRS. BOSWORTH, COHEN, KNIGHT, ASCH, LINCOLN, INGALS, and JARVIS.

The last paper was by DR. FRANK H. BOSWORTH, of New York, on

PARESIS OF THE CONSTRICTOR MUSCLES OF THE PHARYNX SIMULATING SPASMODIC STRICTURE OF THE ŒSOPHAGUS, WITH REPORT OF CASES.

The first case was that of a gentleman who suffered from such marked difficulty of deglutition that he believed him to be suffering from spasmodic stricture of the œsophagus until the perfectly free passage of a bougie down the latter showed that this was not the case. He was treated for three weeks with a strong faradic current (which, however, failed to excite any reflex muscular movements) and with strychnia, while food was introduced by means of the tube of a stomach pump. At the end of that time he became discouraged, and returned to his home in the country, where he afterwards died from exhaustion. Death, it was thought, was hastened by the extreme depression of mind from which he suffered. The other cases, under the use of electricity, strychnia, phosphoric acid, etc., with alimentation by means of a stomach tube, progressed favorably, and made good recoveries.

In the evening the annual dinner of the Association was held at Delmonico's.

SECOND DAY, MAY 22d. MORNING SESSION.

At ten a business meeting was held, at which the reports of the Secretary, the Treasurer, and various committees were made, and miscellaneous business was transacted.

At eleven DR. THOMAS R. FRENCH, of Brooklyn, read a paper on

PHOTOGRAPHING THE LARYNX.

Since the report which he had made at the last meeting a large number of experiments had been tried, and various improvements been made in taking photographs of the larynx, in all of which he had been enthusiastically seconded by his friend, Mr. Brainard, of Brooklyn, a civil engineer by profession, and an accomplished amateur photographer. Their aim had been, first, to simplify the procedure and render it of greater practical utility, and, secondly, to make better photographs. Of late a hand camera, instead of the stationary instrument formerly employed, had been tried, and although the pictures taken by it were considerably smaller in size it rendered it possible to secure photographs of many patients, in whom the larynx permitted only a moderate degree of tolerance, which could not be taken with the stationary camera. The light employed had been of five kinds, namely, unaided sunlight, condensed sunlight, and the oxy-hydrogen, magnesium, and electric lights. The electric light, he said, had been found much less efficient than condensed sunlight, which had proved to be the most satisfactory kind of illumination. While he had most commonly employed the hand camera of late he had not abandoned the use of the stationary instrument in suitable cases, and the photographs taken with it during the last few months were much better than those of last year. Still they were not of much practical value.

Dr. French then described the hand camera and its appendages, including a condenser of sunlight, devised by Mr. Brainard. Some of the photographs (a number of which were exhibited), he said, were so small that they could not be seen well without a magnifying glass, and in order to make them fully appreciable by the unaided eye it was necessary to enlarge them. By the use of more perfect lenses and the adoption of other improvements he hoped to accomplish better results in the future than had yet been attained. The results achieved since last year were summed up as follows: —

(1.) Better photographs taken with the stationary camera. (2.) The camera so modified as to be held in the hand. (3.) Photographs taken instantaneously by means of the drop-shutter. (4.) The parts exposed in the mirror alone photographed. (5.) The securing of photographs without the knowledge of the patient when desirable. (6.) Several diseased conditions of the larynx photographed for the first time. (7.) Portions of the rhinoscopic image taken for the first time.

A paper on

CONGENITAL TUMORS OF THE LARYNX, WITH A REPORT OF CASES,

by DR. H. A. JOHNSON, of Chicago, in the absence of the latter, was read by DR. MACKENZIE, of Baltimore. Of the five cases reported, all of which were of papillomatous growths in the larynx in young children, the first two occurred in the practice of Dr. Monheimer, of Chicago. In the second of these the tumor, which was of the size of a small bean, was expelled during a paroxyism of whooping-cough, and afterwards the infant had no further trouble. In the third case the child was three years old. From birth its voice in crying had been unnatural, and paroxyms of dyspnœa had occurred from time to time. Later the dyspnœa

became more constant, and tracheotomy was performed, with complete relief of the difficulty in respiration. The general health, which had become greatly impaired, was also rapidly recovered. After a time, however, spasms developed and became very troublesome, and about a year after the first operation thyrotomy was performed. The child did well for three days, when pneumonia set in, and on the eighth day after the operation it died. In the fourth case the infant, when seen, was suffering from constant and aggravated dyspnœa, and its general condition was so depreciated that no laryngeal examination was attempted. Tracheotomy was performed as soon as possible, but the child died within twenty-four hours. The history of the fifth case was as follows: On the 20th of June, 1879, he was consulted in regard to a well-grown male child, fifteen months old, whose parents resided at a distance. At the time of birth its voice had been rough and harsh, like that of a boy at puberty, and this had been persistent; becoming even more marked as the child grew older. Its condition was good, and respiration but little disturbed, the only trouble being a slight embarrassment in expiration. When it cried, however, the voice was quite lost, and expiration was greatly interfered with. The diagnosis of congenital neoplasm of the larynx was made, and the advice given that no operation should be attempted unless more urgent symptoms became developed. Ten months afterward he heard from the father, who with his family had in the meanwhile moved to New York State, that the dyspnœa had very greatly increased; and he advised him to consult Dr. Lefferts, of New York. The latter performed tracheotomy on the 10th of June, 1880, and the child did well until the 13th, when it was taken with pneumonia, which terminated fatally on the following day. In conclusion the writer said that the spontaneous expulsion of these congenital tumors had been observed by others also, and that he had himself seen three cases in which spontaneous expulsions of laryngeal growths occurred in adults.

In the discussion which followed DR. KNIGHT remarked that his own conviction in regard to thyrotomy in these growths in young children was that, as a rule, the operation was to be avoided. The best thing to do was to perform tracheotomy and let the growth alone, so as to afford an opportunity for spontaneous expulsion, or else to permit the child to attain an age when the tumor could be removed through the mouth. If thyrotomy were performed there was great danger of permanently injuring the voice, and also great danger of the recurrence of the growth. Circumstances might, however, arise, as in one of the cases related in the paper, which might render thyrotomy imperative.

DR. ROE, of Rochester, had seen two cases. In the first he advised tracheotomy; but the symptoms not being very urgent at the time, it was not done, and the child passed from observation. In the second case he performed tracheotomy, and, being of the same opinion as Dr. Knight in regard to thyrotomy, advised that nothing further should be done for the present. The tracheotomy had been performed four months ago, and since then the child had done perfectly well.

DR. SOLIS-COHEN thought it was exceedingly doubtful whether all these tumors were really congenital. It was well known that papillomatous growths often occurred after croup, diphtheria, measles, and even ordinary catarrh, and he believed that as a congenital condition it was extremely rare. In regard to the occurrence of pneumonia after tracheotomy, he thought there was no question of the imminent danger of the onset of this disease after all operations in the cervical region. It was possible that this might be caused by the exposure of the pneumogastric nerve to cold, and it was, at all events, desirable that such operations should always be performed in a properly heated atmosphere. Like Dr. Knight, he was opposed to the performance of thyrotomy unless the patient were in imminent danger. He did not consider the alteration of the voice of any account, if life were saved by it; but the great objection to it, in his opinion, was that it was liable to occasion permanent injury to the larynx, in which, as was well known, such marked changes took place at the age of puberty.

DR. KEALHOFER, of St. Louis, had seen two cases in which the neoplasms appeared so early in life that there seemed a strong probability of their being congenital. In one case papillomatous growths were spontaneously expelled some time after tracheotomy had been performed. In consequence, the tube was removed and the opening closed; but later the growths recurred, and the trachea had to be opened again. For two years the child had worn the tube without any bad effects, a gold double canula being used.

DR. DUNCAN, of New York, also reported two cases, in one of which operative interference was refused, and the child died in a fit of suffocation.

A paper by DR. WILLIAM PORTER, of St. Louis, on

LARYNGEAL PARALYSIS FROM ANEURISM,

in the absence of the author was read by title only, and the session was brought to a close by a discussion of Dr. French's paper on Photographing the Larynx.

AFTERNOON SESSION.

The first paper was by DR. LOUIS ELSBERG, of New York, on

REFLEX PHENOMENA DUE TO NASAL DISEASE.

In it he related the case of a girl of fourteen who was the subject of the most violent choreaic movements. She belonged to a catarrhal family, but had always enjoyed good health till a year previously, when she began to suffer from coryza, which had now become chronic. The chorea came on gradually, and it was always aggravated when she took fresh cold. As it seemed so dependent upon the nasal affection attention was devoted exclusively to that, and when the latter had been removed the chorea was permanently cured. Among the conditions which he enumerated as sometimes due to nasal disease were melancholia, chorea, reflex epilepsy, neuralgia, gastric disturbances, uterine disorders, and such affections as nervous cough, spasm of the glottis, and bronchial asthma. In one case a man had violent attacks of sneezing during coitus. The general health of a girl, whose sexual development had been markedly retarded, was gradually ameliorating with the improvement in the nasal disease from which she was suffering. In conclusion, Dr. Elsberg alluded to some observations in connection with the relation of nasal affections of children to nervous phenomena which had recently been communicated by Dr. Jacobi to the New York Obstetrical Society.

DR. MACKENZIE said that some of the phenomena mentioned by Dr. Elsberg he had met with in his own

practice, and he had frequently noticed the dependence of cough, particularly, on nasal disease. Some of the conclusions which he had arrived at after a somewhat careful study of this subject were the following: (1.) In the nose as well as the larynx there is a well-defined, circumscribed area, the irritation of which is capable of producing reflex phenomena, and especially cough. (2.) This is situated in the region of the turbinated bones. (3.) All points of this area are not of equal sensibility. (4.) The susceptibility to reflex cough varies in different individuals.

DR. ROE remarked that it was often necessary to look for the cause of disease in other organs than those apparently affected. Thus, asthma frequently depended, both in acute and chronic cases, on nasal disease. Hay fever with asthma was an example of this. He then related the case of a gentleman who suffered intensely from attacks of asthma, and in whom he found a marked hypertrophy of turbinated tissue. After he had removed the hypertrophied tissue, the asthmatic trouble became permanently cured.

DR. SEILER, of Philadelphia, stated that some time since he published in the *Archives of Laryngology* two cases of reflex irritation from nasal disease, and that since then he had met with four very marked cases of this character. One was that of a child who was attacked suddenly with chorea after exposure to wet. On examination he found a greatly hypertrophied condition of the nasal mucous membrane, and when this was removed every trace of the chorea ceased at once. There was another class of cases in which there were sudden attacks of extremely violent coryza lasting only a very short time and accompanied by a profuse watery discharge from the nostrils, and in one case of this character which came under his observation an attack was instantaneously brought on by his touching the anterior edge of the middle turbinated bone in making an examination of the nasal cavity.

DR. BOSWORTH thought it better to call the affection just described by Dr. Seiler a neurosis characterized by sudden profuse discharge than coryza, as it was entirely different from the inflammatory process thus designated. It was an affection of great interest, and the literature of the subject was very sparse. Two cases reported by Sir Benjamin Brodie, who was the first to call attention to it, two cases of Sir James Paget, and two cases published in the *Lancet* during the past year were all that had as yet been recorded. The discussion was continued by Dr. Jarvis and closed by Dr. Elsberg.

DR. CLINTON WAGNER, of New York, then read a paper entitled

SMELL, HYGIENICALLY AND MEDICO-LEGALLY CONSIDERED.

After some general remarks on the sense of smell, which, he said, was capable of a very high degree of cultivation, he went on to state that foul odors, as a rule, were unwholesome. Those habitually exposed to them soon grew so accustomed to them that they did not notice them, and it was often wondered why such persons remained in apparently good health. The explanation was that they generally had plenty of exercise in the open air in attending to their work, and thus continued in a fair state of health in spite of the offensive smells. There were manufacturing establishments of various kinds in or near all large cities the unpleasant odors from which had an injurious effect upon the health of those in their neighborhood who were in a delicate condition. It was the common belief that the effluvia arising from stables was healthful, an idea that was probably founded on the robust appearance of many hostlers and grooms; but this was not the case, and it had been proved that zymotic diseases were, as a rule, more fatal in the vicinity of stables than elsewhere. The reason why stablemen appeared so healthy looking was, as in the cases mentioned above, on account of the large amount of open-air exercise which they generally had. After mentioning the foul and unhealthy odors often generated in military camps, he spoke of those met with in tenement-houses, theatres, churches, schoolhouses, etc., which were so noticeable to those going into them from the outside air. In this connection he said that many lives were lost from typhoid, typhus, scarlatina, and diphtheria which might have been saved if the timely warning afforded by the sense of smell had been heeded. Sanitary inspectors, surgeons, and other medical men, he thought, might increase their efficiency by cultivating their olfactory nerves.

Having spoken of some of the affections, such as small-pox and pyæmia, which were attended by peculiar odors, he proceeded to treat of the medico-legal relations of the subject. Legal action could be taken against such public nuisances as had been mentioned, and in this connection it was important to remember that the testimony of witnesses habitually exposed to foul odors was worth nothing in such cases. On the other hand, the evidence of two or three credible witnesses who were not thus accustomed to the odors was to be regarded as conclusive. In railroad and other accidents individuals sometimes received injuries which completely destroyed the sense of smell, and yet which might give rise to no visible trouble except some bleeding from the nose at the time of the accident. A suit for damages could, of course, be brought for the loss of this valuable sense. In the case of individuals found dead the odor of prussic acid or of one of the essential oils about them sometimes suggested the proper course of investigation to ascertain the cause of death, and the odor peculiar to the persons of puerperal women might lead to the discovery of the fact of a miscarriage having taken place.

The next paper was by DR. HARRISON ALLEN, of Philadelphia, on

ASYMMETRY OF THE NASAL CHAMBERS,

in which he stated that when there was a difference in the size of the two nasal cavities the larger would be found on that side on which the posterior protuberances of the cranium were the more prominent, and that the best way to make the examination was from the posterior nares.

DR. DELAVAN made some remarks on the paper.

The last paper of the session was by DR. RUFUS P. LINCOLN, of New York,

ON THE RESULTS OF THE TREATMENT OF NASO-PHARYNGEAL POLYPI, WITH DEMONSTRATION OF SUCCESSFUL CASES.

The object of the paper was to establish the superiority over other methods of the removal of these tumors by means of the galvano-cautery as regards danger to the patient from shock, hæmorrhage, and other sources, and as regards recurrence of the growth. In regard to the latter point he laid great stress on the

importance of making a number of applications of the galvano-cautery button to the stump, at intervals, after the tumor had been removed, by means of the galvano-cautery écraseur. He had collected the records of all the cases of operation for removal of naso-pharyngeal polypi, as far as possible, which have been published in Europe and America during the last fifteen or sixteen years, seventy-six in number, and from the tables thus made it appeared that out of twenty-eight patients who were operated on by Langenbeck's method or some other procedure in which section of the bones of the face was made, no less than eight died from the effects of the operation (a mortality of nearly one third) while in three other instances a fatal result was only averted with the greatest difficulty. Two of these fatal cases had occurred only within the last year in the practice of well-known New York surgeons. The only other case in which death resulted from an operation for removal of naso-pharyngeal tumor in the tables was one in which Mr. Cooper Forster practiced avulsion, and a fracture of the cribriform plate of the ethmoid was caused by the forceps used. In the list of cases were two which Dr. Lincoln had reported at the meeting of the Association in 1879, and there had been no recurrence, although one had been operated on eight and the other seven years ago. There was one practical point of great interest in connection with the first of these. At the time of the operation there had been a tumor of the cheek, apparently continuous with the naso-pharyngeal growth, but it had disappeared spontaneously, and it seemed altogether probable that its source of nutriment was cut off when the pedicle at the base of the skull was severed. The second case, as regards the extent of the disease and the gravity of the symptoms, was one of the most serious that had ever been reported, and yet the recovery had been perfect. A beautiful wax model of this case, made by Dr. Goodwillie, was presented. The third case, now reported for the first time, was operated on by Dr. Lincoln on the 8th of January, 1883, by the galvano-cautery écraseur, and five applications of the platinum disk, heated by galvanic battery, were afterwards made, at intervals of a week, to the stump. The tumor was of the size of a Seckel pear, and attached to the vault of the pharynx by an oval pedicle one inch by three quarters of an inch in diameter.

DRS. JARVIS, A. H. SMITH, and SEILER related cases in which they had operated with the wire écraseur, but in the greater number of those in which any considerable time had elapsed since the operation there had been a recurrence of the growth. DR. BOSWORTH said that the thanks not only of the Association but of the profession at large were due to Dr. Lincoln, whose series of brilliant successes in the treatment of these most formidable tumors, he thought, was the most remarkable that had ever been published, and in closing the discussion DR. LINCOLN said that though objections had been raised on account of the difficulty in some cases of adjusting the wire of the écraseur, he believed that by patience and perseverance this could always be overcome.

At the end of the session Dr. Lincoln exhibited all three of the patients from whom he had removed naso-pharyngeal tumors to the members present.

Before adjournment DR. HOLDEN, of Newark, exhibited an apparatus for electric illumination of the pharynx and other cavities, devised by Mr. Edison.

In the evening the Association enjoyed a theatre party at Wallack's, followed by a supper at Delmonico's, given by the President, Dr. Lefferts.

THIRD DAY, MAY 23. MORNING SESSION.

The first paper was by DR. J. SOLIS-COHEN, of Philadelphia, on

A CASE OF THYROTOMY FOR MORBID GROWTH, WITH SUBSEQUENT DEVELOPMENT OF EPITHELIOMA IN THE CUTANEOUS CICATRIX, BUT WITHOUT INVOLVEMENT OF THE INTERIOR OF THE LARYNX.

The tumor occurred in a gentleman of sixty-three, a lawyer by profession. It was situated on one of the vocal bands, and, under the impression that it was epitheliomatous in character, it was removed by thyrotomy. The microscopic examination by Dr. Seiler, however, proved it to be a papilloma. The voice, which had been reduced to a laryngeal whisper, was not restored immediately by the operation, but afterwards returned in full vigor. Nearly two years afterwards a small growth appeared over the right wing of the thyroid cartilage, which on removal proved to be a tubular epithelioma, and shortly afterwards a growth of similar character appeared over the left wing of the thyroid cartilage, and was removed. At this time skin-flaps from the chest were employed to cover the rest of the growth, but fistulæ afterwards were found at two points where the flaps were joined. No further operative procedures were advised, and the patient returned to his home in the South, where he died early in January, 1883. The physician who attended him at that time wrote that the external tumor was then four inches in diameter, and that no disease of the larynx was found at the autopsy. Dr. Cohen thought that this was an example of malignant growth arising from local irritation, and believed that the epithelioma had probably resulted from the irritation caused by spiculæ of bone, which had remained after the first operation of thyrotomy.

DR. F. H. HOOPER, of Boston, read a paper on

EXPERIMENTAL RESEARCHES ON THE TENSION OF THE VOCAL BANDS.

Two elaborate series of observations were undertaken in connection with Prof. Henry P. Bowditch, of Harvard. The first series was in regard to the action of the crico-thyroid muscle, and after stating the six different hypotheses which had been advanced on this point, he proceeded to give the history and results of the experiments made, which, he said, were performed in a different manner from any that had been previously attempted, and which confirmed the accuracy of Magendie's early observations. They were performed on dogs by stimulating the muscle both before and immediately after death, and the movements of the cartilages were automatically recorded by tracings with a pen at the end of a lever. The results of these experiments proved conclusively that no positive movement was imparted to the thyroid cartilage, and that the action of the muscle was to draw up the cricoid on to the thyroid. The extreme mobility of the cricoid was found to be one of its most striking peculiarities, and to this the stretching of the vocal bands was undoubtedly due.

The second series of experiments was instituted for the purpose of investigating the effect of an expiratory blast of air, and resulted in proving that the action produced was exactly like that of the crico-thyroid muscle, so that this was shown to be also an important

factor in tightening the cords. There were ninety-two experiments on nine different dogs, and in all of them there was a marked excess of movement of the cricoid over the thyroid cartilage. Experiments were also made to prove the effect of the powerful muscles attached to the crico-thyroid articulation, and it was found that when these were cut, the rise was much greater than before their section. The results were not invariably uniform; but this was attributed to the more or less imperfect manner in which the experiments were conducted. It was demonstrated, therefore (1), that at high pressures the cricoid invariably moved more than the thyroid, and (2) that at high pressures, after section of the muscles, both the cartilages are moved freely, but the difference between the two was not so great. Finally, experiments were made to show whether the movement of the cricoid and the stretching of the vocal cords was necessarily accompanied by expansion of the larynx. The method adopted was devised by Dr. Bowditch, and it was found that when one crico-thyroid muscle was stimulated, the lever of Marié's drum descended ten millimetres, and when both, fifteen millimetres. The lumen of the larynx was therefore demonstrated to be enlarged by the upward movement of the cricoid. The general conclusions were: (1.) The cricoid cartilage is the most movable part of the laryngeal apparatus. (2.) The crico-thyroid muscle arises from the thyroid and is attached to the cricoid muscle. (3.) The expiratory air-clot is a direct and important longitudinal tensor of the vocal bands.

The paper was discussed by Drs. Allen and Langmaid.

The next paper was by Dr. Beverley Robinson of New York, and was entitled

AURAL COMPLICATIONS OF INFLAMMATORY CONDITIONS OF THE NOSE AND THROAT.

Such complications, he thought, had been too much neglected by laryngologists, and deserved more consideration than they received, because (1) they were more frequent than was generally supposed; (2) when they did occur they were very important, and (3) it behooved laryngologists more than any other practitioners except aurists to be familiar with their symptoms, course, and treatment. The first part of the paper was devoted to a consideration of acute aural complications, especially those apt to occur in the course of the exanthemata and of typhoid fever, and the second to those of a chronic character. It was discussed by Drs. Mackenzie and Jarvis.

The last paper of the session was by Dr. D. Bryson Delavan, of New York, on

THE LACUNÆ TONSILLARIS,

in the course of which he stated that on account of the anatomical structure of the tonsils a pathological condition affecting the surface was liable to extend into the crypts, and thence, on account of their connection with the lymphatics, is communicated to the general system. This was strikingly shown in diphtheria. This peculiar structure, on the other hand, offered special facilities for the relief of diseased conditions of the glands, as it was possible to make applications directly to the delicate walls of the crypts. It had been objected that when the tonsils were of normal size this was impracticable; but it was to be borne in mind that such conditions were, as a rule, attended by hypertrophy. Disinfectants, astringents, and cauterants could be applied in this way, and it was usually desirable to cleanse the crypt before using such agents. In cases where for any reason it was inadmissible to excise permanently hypertrophied tonsils caustics for the reduction of the hypertrophy could thus be used; but there could be no stronger argument in favor of excision than this peculiar anatomical construction.

AFTERNOON SESSION.

The first paper read was by Dr. George W. Major, of Montreal, on

THE VALUE OF POST-LARYNGEAL PAPILLOMATA, AS A MEANS OF DIAGNOSIS IN TUBERCULAR DISEASE.

The conclusion at which he arrived after a careful series of observations was that this phenomenon was perfectly satisfactory as to diagnosis, and perfectly unsatisfactory as to prognosis. In the twenty-three cases in which he had noticed the condition every one of the patients was either tuberculous at the time or had a tubercular tendency, and all of them had terminated fatally.

After a few remarks by Dr. Asch, who said that he had not found that the condition always indicated tuberculosis, Dr. E. C. Morgan, of Washington, read a paper on

A CASE OF ENORMOUS TUMOR REMOVED FROM THE GLOSSO-EPIGLOTTIC SINUS, WITH REMARKS.

The tumor was a myxo-sarcoma, and was removed by avulsion with the fingers. It was two and a quarter inches by two and three quarter inches in circumference, and had a narrow pedicle a quarter of an inch long. The paper included a report of two other pharyngeal tumors removed by Dr. Johnson Eliot, of Washington, and also a complete bibliography of all the authentic cases of pharyngeal and laryngo-pharyngeal tumors which had been recorded since 1812, sixty-one in number. He said, in conclusion, that he had asked attention to this case for four reasons, namely: (1.) The rarity of pedunculated sarcoma. (2.) The size of the growth. (3.) The use of the fingers in its removal. (4.) To ascertain whether in the opinion of the Association it was justifiable to remove such a tumor without knowing its pathological character. Drs. Ingals, Delavan, Lincoln, and Asch took part in the discussion.

The next paper was by Dr. Morris J. Asch, of New York, on

A CASE OF SUDDEN DEATH OCCURRING AFTER TRACHEOTOMY, WITH REMARKS.

The patient was forty-four years old, and tracheotomy was performed to prevent death from suffocation on account of almost complete paralysis of the adductors of the larynx. Death took place suddenly on the third day (the patient in the meanwhile having experienced entire relief), and, the autopsy revealing no adequate cause of death, he was of the opinion that it was due to mental emotion and probably occurred by inhibition. In connection with this case he said that he wished to call special attention to the gravity of the condition of a patient in whom tracheotomy had been performed when it was possible that a slight cause might produce death, and also to the fact that this operation was a more serious one than the works on sur-

gery or the general opinion in regard to it would lead, us to believe.

The last paper was one by DR. ANDREW H. SMITH, of New York, on

ADHESION OF THE VELUM TO THE WALLS OF THE PHARYNX,

and it contained a report of several cases, two of which were presented for the inspection of the members present. It also included a résumé of the literature of the subject, and a recital of the various operative measures which had been suggested for its relief.

The following officers were then elected for the ensuing year: President, Dr. F. H. Bosworth, of New York; First Vice-President, Dr. S. W. Langmaid, of Boston; Second Vice-President, Dr. S. Johnston, of Baltimore; Librarian, Dr. T. R. French, of Brooklyn. Dr. Delavan remains the Permanent Secretary and Treasurer.

Medical and Surgical Journal.

THURSDAY, MAY 31, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

COMMON SENSE IN THE PRACTICE OF MEDICINE.

WE have most of us learned to laugh at the physician who recommends a European trip to an invalid whose income has ceased with his illness, and advises costly wines and delicacies for the child of the working man who provides with difficulty the daily bread.

It is the doctor's duty to consider the circumstances of his patients and their resources, mental and pecuniary. In one case he may recommend the transferring the family to Egypt if he chooses, in another he must be satisfied with a change in the position of the kitchen stove. So, too, it is sometimes necessary to consider the duties of the patient to those dependent upon him, and the individual who really ought to be in bed with a careful nurse it may be proper to sustain in the accomplishment of something more important than even life itself. In other words, advice right in one case may be wrong in another when the mere individual disease is the same, and a doctor ought to know as much as possible of his case before he advises radical changes which affect the condition of others beside his individual patient. There is by no means anything new or original in these remarks; they are certainly trite, but perhaps not entirely uncalled for. A case has come to our knowledge which appears to justify them. A certain doctor became interested in a family that seemed to him better than their surroundings. On small pay they kept a home that was noticeably more homelike than their neighbors'; they were unwilling to allow the children in the street; by small installments they paid their bills, but sickness kept pace with their exertions. The M. D. rode his hobby, in fact he rides several, but the particular hobby that he rode in this poor man's dwelling was country air for children. To transfer a poor family from a crowded tenement-house far enough out of the city to find detached houses and free playgrounds out-of-doors is in his eyes almost as good as preaching a sermon or passing a contribution box. In this case his preaching was not unpleasant to his congregation, and the family moved into the outskirts of the city where fresh air was plenty and neighbors not much too near. For a year the family vanished from the doctor's knowledge, at the end of which time the mother reappeared with a request that he should visit one of the little ones in a locality fully as bad as, and as the sequel showed, worse than, that from which he had driven them twelve months before. The baby of eighteen months was suffering from an ill-defined attack, of uncertain nature, which passed off after a few days. Scarcely was that over before the father was taken down with a severe headache and gastric disturbance; almost simultaneously a little girl of four was attacked with diphtheria, from which she is just recovering. The baby, transferred immediately to another house, was nevertheless attacked, and died within forty-eight hours; patches appeared upon the mother's tonsils, which soon disappeared under treatment, but left her dreadfully worn out and debilitated. The father, obliged to stay at home from his daily work, in addition to meeting the expenses of sickness and death, has become plunged into debt from which relief without help seems hopeless.

"Why did you leave the country?" asked the doctor at one time in the midst of the few days' campaign narrated above. The answer was somewhat as follows: "The money I used to pay to the doctor paid for traveling back and forth; it was sometimes hard, but the children were well and we were contented, but my wife had some trouble and came to a doctor in the city, who told her it was necessary for her to move right into the city to be treated. So we came to the first tenement we could find, hoping to change to a better one later, though poor men have little choice." A single month in that first tenement was sufficient for the circumstances narrated above.

Perhaps the doctor we have quoted is more emphatic than the circumstances warrant (we all feel most strongly the facts that uphold our hobbies) when he says that brains need be mixed with a physician's prescriptions, and that the poor sometimes pay dearly for free advice.

REGULATION OF THE PRACTICE OF MEDICINE IN ILLINOIS AND NEW HAMPSHIRE.

THE regulation of the practice of medicine in the few States in which it is attempted is watched with great interest in the States in which no such regulation finds place, and even in the unregulated States the laws of their neighbors are not without effect. We in Massachusetts owe to the Illinois Board of

Health, which has the control of the physicians of that State, the exposure of a diploma mill in our own State, and the JOURNAL was glad to help on the work to the best of its ability at the time. Some other incidents in the workings of the Illinois law have, by giving all publicity possible to the matter, come to our knowledge which are at once interesting and amusing, and we take pleasure in laying them before our readers.

The following is, as nearly as type can reproduce it, a fac-simile of a postal card recently received by the Illinois State Board of Health: —

> Fieldon Ill 5–12–83.
> John H. Rauch M D. Sir. you still persist in trying to freighten our Graduates, like Springer of Hardin. who have attended two full, long terms in our School & Honorably graduated. I look upon you, as the chief, of a set of Dastard Bigots & villians & the sooner you arrest Springer the sooner you will get through with it. Yours. L C. Washburn. President of the St. Louis Eclectic Medical College.

It is needless to say that the "Dastard Bigots & villians" who compose the Illinois State Board of Health have declined to recognize the St. Louis Eclectic, and "freighten" its alleged graduates by refusing to issue them certificates entitling to practice.

In March last a certificate was issued by the State Board of Health entitling one Julius Nothhelfer, of St. Louis, to practice medicine and surgery in Illinois. The application for this certificate was based upon an affidavit that the applicant was a graduate of the St. Louis Medical College, corroborated by a letter from a member of the Faculty of that institution, in which he says: "I can sincerely endorse Dr. Julius Nothhelfer, as to his moral and professional character and standing." In his first letter, March 7th, Nothhelfer states that he intends "to practice in a country town in Illinois."

In the same month a similar certificate was issued to one Joseph Fitzgerald, also of St. Louis, and this was granted upon an affidavit that Fitzgerald graduated from the Royal College of Surgeons, Ireland, in 1871. The affidavit was accompanied by a number of letters bearing testimony to his capabilities as a medical man, etc., which were all written in Dublin, none later than 1874, and a rather cautiously worded letter from a prominent St. Louis physician, its reticence being plausibly explained on the ground that the applicant was a stranger in that city.

Not long ago the attention of the secretary of the State Board was attracted by a large three-column four-paged circular, headed "The Great Surgeons, Drs. Nothhelfer and Fitzgerald, late of London, Eng., graduates of King and Queen's College, will be at the Commercial Hotel, Chicago, for one month. Terms for treatment, cash. Charges from $10 to $500, owing to the requirements of the case."

In this circular they not only promise to cure every imaginable disease, but offer $500 reward for an incurable case. Everything is done by "new methods of treatment, new and recently invented instruments, and new and recently discovered remedies." Some of the passages are unique even in quack literature. Of course correspondence is solicited after the usual method and for the usual purposes of the infamous fraternity; consultations are free, and every imaginable device is employed to entrap the victim. What is meant by "consultation free" was tested when they offered to visit and prescribe for an imaginary patient gratis, but would charge $10 for the medicines.

The case was such a flagrant one, and came so clearly within the authority of the Board, that the secretary laid the facts at once before the individual members and received their prompt authorization to revoke the certificate.

The foregoing facts were published at length in the Chicago and St. Louis papers of Wednesday A. M., May 2d. Before noon of that day the street distributors of the circulars were arrested, and within twenty-four hours Nothhelfer and Fitzgerald had departed.

The condition of affairs in New Hampshire is shown by the following incident: Some time in May a medical student swore out a warrant for the arrest of a medical practitioner for practicing without a license from a New Hampshire medical society. Evidence was offered showing that defendant advertised his many alleged cures in local daily papers, also the confidence of patients who had paid defendant for treatment. The defense testified that he studied medicine in due course, two years of which was at the New York Eclectic Medical College, and that he was regularly graduated. His diploma was exhibited in court. He practiced medicine outside New Hampshire for fourteen years; settled in Concord, N. H., December, 1881, and in January, 1882, applied to the Eclectic State Medical Society for a license as the laws of New Hampshire required. The censors refused to grant him a license on the ground that he violated the rules of medical etiquette by advertising in the newspapers and traveling from place to place. His home was in Concord, but he practiced in all parts of the State to accommodate patients. He claimed that the censors had no right to withhold the license because he advertised; that it is not a violation of the State laws nor any law of the medical society; hence the license was withheld unjustly. The defendant's counsel contended that the court should give liberal construction to the whole chapter, which was designed to protect the people from quacks only. Dr. Gage had obtained a regular professional education and should not be debarred by an arbitrary board of censors. Counsel for the prosecution contended that the censors' decision was final; that Gage had practiced without a license and violated the State laws. The court ordered that the defendant be unconditionally discharged, without costs.

— A contemporary estimates that there are half a million opium smokers in this country.

THE HYGIENIC EXHIBITION AT BERLIN.

That the Hygienic Exhibition is an established fact is evidenced by its catalogue, which we have just received. It covers nearly 300 octavo pages; a plan of the buildings accompanies this somewhat formidable array of names, and 300 pages of advertisements add to its bulk. After the unfortunate occurrence of last year it is not surprising to find that the regulations contain some very strict rules in regard to the use of fire. Smoking is forbidden in capital letters, and all inflammable articles are to be daily cleared away.

The exhibition is to be continued until the middle of October.

MEDICAL NOTES.

— At the annual meeting of the Norfolk District Medical Society, held May 8, 1883, the following named Fellows were elected officers for 1883–84: President, Joseph H. Streeter; Vice-President, Alexander R. Holmes; Secretary, Reporter, and Librarian, George D. Townshend; Treasurer, Edward G. Morse; Commissioner of Trials, Silas E. Stone; Censors, George K. Sabine, George W. Clement, Eugene F. Dunbar, Edwin L. Farr, John B. Moran; Councillors, Robert Amory, George A. Bragdon, Henry P. Bowditch, Thaddeus T. Cushman, Benjamin Cushing, James S. Greene, John A. Gordon, Charles C. Hayes, Isaac H. Hazleton, Alexander R. Holmes, Edward Meade, Joel Seaverns, Charles C. Tower, David B. Van Slyck, Joseph A. Winkler; Nominating Councillor, Robert Amory.

— The Suez Canal is in a fair way of becoming an open and stagnant sewer. The stations on its banks are drained into its waters. It is never flushed, there is no tide, and the stench is becoming intolerable. Diarrhœa and sickness prevail in vessels detained in the canal, and as detentions are increasing in number and duration the matter is becoming serious.

— The grand jury of Essex County, New Jersey, have made a presentment in regard to the County Lunatic Asylum at Newark in which they recommend the appointment of a resident physician, an increased number of attendants, that the proceeds of the patients' labor shall be for their own benefit, that the partially insane shall not be placed in contact with the hopelessly insane, and that a library be established for convalescing patients.

NEW YORK.

— The graduation exercises of the Mount Sinai Hospital training school for nurses were recently held at the hospital buildings, where Dr. Abraham Jacobi delivered an address on the history and development of training schools for nurses. Diplomas and medals were presented to a class of thirteen graduates, and special prizes awarded to Misses Davis, Jager, and Gutman for proficiency.

— The danger and folly of prescribing by druggists is well shown in a case that has just terminated fatally at Bellevue Hospital. A young girl who had taken an overdose of laudanum (by mistake, according to her own account) applied to an apothecary, Isaac Clasier, of 859 First Avenue, who, instead of directing her to a physician or hospital, prescribed for her himself. After nearly two precious hours had been lost she came back to the shop, saying that she was growing more and more stupid and sleepy. The man, now growing alarmed, notified the police, and (the girl in the meanwhile having become unconscious) an ambulance was sent for, which conveyed her to Bellevue. In spite of the most vigorous treatment, however, the patient did not rally from the profound narcotism which had by this time set in.

— It is certainly a hard matter that a medical man should not be allowed to receive a comfortable fee freely offered him out of gratitude for services rendered, without suffering for it in the courts. A physician of Milville, New Jersey, having assisted a friend and neighbor in obtaining a pension for her son, who served in the volunteers during the late war, was presented by her with a hundred dollars. The lady's children thought this amount rather large, and the doctor, hearing of this, immediately returned the money, when the family sent him back the sum of sixty dollars. The matter having come to the knowledge of the Pension Department, however, it was reported to the grand jury, and he was fined fifty dollars. The legal fee for such service, it seems, is ten dollars, and the doctor had not really charged more than that; the balance being simply a free-will offering.

— The late minister to the Court of St. Petersburg from Japan has been visiting New York on his way home from Russia with a small party, which includes Dr. Kitao, who has just taken the degree of Doctor of Philosophy at the Berlin University. The doctor is about to return to Japan to practice.

— Quite a vigorous crusade has lately been made against the Chinese opium dens on Mott Street, which are frequented by many New York women and young girls, and are represented as the abode of all sorts of vice. The habit of opium-smoking is said to be rapidly on the increase in the community, and Mr. Allen S. Williams, who has just completed a work on the subject, states that there are now nearly half a million persons in the United States who indulge in the practice.

— Three cases of small-pox were found among the steerage passengers of the steamer Rotterdam, which arrived from Rotterdam May 21st, two of the patients being children. The sick were transferred to the Small-Pox Hospital on Blackwell's Island, and the remainder of the 519 passengers, most of whom had already been vaccinated, were taken to Dix's Island in the harbor until it could be seen whether any new cases would become developed.

— A gentleman belonging to a well-known New York family met with his death recently at the Hot Springs, Ark., in a very curious manner. Having gotten up in the night to take a drink of water, the pitcher, the mouth of which was broken, accidentally slipped from his hands, and in falling struck his thigh in such a way that the sharp edge of the broken

vessel cut open the femoral artery. When found he was unconscious from loss of blood, and all restorative efforts proved futile.

— The opium dens are not all confined to the Chinese quarter in Mott Street, as is shown by the recently published confession of a woman who kept a fashionable smoking parlor up town, from which it appears that ladies, apparently of good social position, were her regular customers. Her place was given up only because one of the victims told the secret, and ladies were ashamed afterwards to be seen entering the "millinery establishment." The habit of opium smoking seems to have been steadily on the increase of late in New York and other Eastern cities, as well as in the West, and the records of the National Bureau of Statistics show that while the Chinese population in the United States has remained nearly stationary since 1876, the amount of opium imported increased from 189,354 pounds of gum opium and 49,375 pounds of the prepared drug in 1872 to 243,211 pounds of gum, and 77,196 pounds of prepared opium in 1880.

— During the excavating for the foundations of the towers of the Brooklyn bridge one hundred and ten cases of "caisson disease" occurred, including that of Mr. Roebling, the engineer under whose direction the structure was completed, and at least three of these proved rapidly fatal. Dr. Andrew H. Smith several years ago published some interesting articles in regard to the effects of compressed air in this connection. During the progress of the work some twenty lives were lost from injuries; the first being that of Mr. John A. Roebling, the author of the plan of the bridge, and father of the present engineer, who died of tetanus from having his foot crushed at Fulton Ferry in July, 1869, while selecting the site for the Brooklyn terminus.

— An examination of the records in the Bureau of Vital Statistics shows that from the year 1867 to 1882, inclusive, seventy-one persons were suffocated by illuminating gas in New York, eleven of the cases being recorded as su'cides That the rate of mortality from this cause is on the increase is shown by the fact that while in 1871 there were twelve deaths from it, in 1881 there were fifteen, and in 1882 twenty-one.

— The free public baths open for the season on the first of June. These are nine in number, five of them being located on the East River and four on the Hudson, and the manner in which they are appreciated by the people is shown by the fact that during the last summer and early autumn they were used by 2,561,868 persons; 1,866,847 of these being males, and 692,021 females. Aside from their sanitary benefit and the vast amount of pleasure which they afford, these baths are undoubtedly of great service in increasing the knowledge of the art of swimming in the community. It is gratifying to note that a bill providing for the construction of four additional baths was recently passed by the Legislature and received the Governor's signature, and these will be completed as rapidly as possible.

Miscellany.

POISONING FROM NITRITE OF AMYL.

AN English contemporary reports a case of supposed death from nitrite of amyl. The victim was an English captain in Hong Kong, who had been suffering from phthisis, and who fell under the care of an incompetent physician, who, we regret to say, was an American, and who told him that he had no lung trouble, but did have heart disease. For this affection he prescribed nitrite of amyl, giving him seven drachms with instructions for inhalation. A short time afterwards the captain was found dead in his bed one morning, having gone to bed, it was believed, in his usual health. A physician who was called in found the body lying in the normal position of a sleeping man. There was a handkerchief in the right hand, and three bottles containing nitrite of amyl were found in the saloon adjoining the cabin. This attendant declining to give a certificate of death, the coroner ordered a post-mortem examination. Extensive phthisis was found, there being cavities in both apices. As regards the state of the heart the witnesses did not quite agree, two of them stating that the left ventricle was empty, but one (who admitted that he was not present when the heart was opened) said that the left ventricle contained some blood. The valves and muscular substance were found to be natural. These witnesses were practically agreed that death had been due to heart failure, and that this was not accounted for by anything found at the autopsy. Dr. Fisher, the prescribing physician, in his testimony said that he had treated the patient for angina pectoris, that he had found a murmur over the heart indicative of mitral regurgitation. In his opinion the patient had died from angina pectoris. The worth of this witness's opinion may be inferred from the fact that he explained that in mitral regurgitation there was disease of the mitral valve, causing regurgitation into the left ventricle! In the end the jury returned an open verdict, the evidence not being legally conclusive of the drug having caused death, but the presumption, of course, being very strong that it did.

UNDILUTED MILK FOR INFANTS.

DR. PERRON, in a series of articles on infant feeding in *La France Médicale* (March 6th), takes strong ground against the common practice of diluting milk with water for administration to young children. He says that it is absurd to suppose that fifty grammes of milk, for instance, diluted with an equal amount of water is any easier of digestion than fifty grammes of pure milk, a coagulum dissolved in one hundred grammes of which is no more digestible than it would be in half that amount. For a few days, and even possibly for a few weeks after the birth of the child, this author dilutes to a slight extent the milk he administers, but as a rule only so long as it is desired to replace the colostrum in the maternal fluid. After that he advises pure milk given only in very small quantities. He gives water, if at all, separately when the child is thirsty. His theoretical arguments are, to say the least, novel, one being that as we do not dilute the milk of a wet-nurse we should not that of a cow. Lébert is quoted in support of the clinical success of this method of alimentation. The only way in which this writer diminishes the richness of milk is by securing it from an animal which has just calved.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 19, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Measles.
New York	1,206,590	728	254	19.86	15.76	3.56	4.11	4.80
Philadelphia	846,984	344	121	11.10	10.50	5.10	1.80	.60
Brooklyn	566,689	264	93	17.39	20.41	4.91	9 45	.76
Chicago	503,304	198	99	18.18	14.64	4.54	5.05	.57
Boston	362,535	175	61	18.81	20.52	5.13	1.14	8.09
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	148	52	23.65	2.70	7.43	4.05	3.38
Cincinnati	255,708	105	43	18.05	16.15	.95	6.65	2.85
New Orleans	216,140	167	65	40.66	2.99	—	.60	—
District of Columbia	177,638	77	20	12.98	5.19	1.30	—	1.30
Pittsburg (1883)	175,000	60	28	13.11	15.00	—	1.66	3.33
Buffalo	155,137	93	33	20.44	18.29	5.08	—	7.54
Milwaukee	115,578	51	31	37.24	11.76	11.76	5.88	—
Providence (1883)	116,755	45	8	13.33	11.11	4.44	2.22	—
New Haven (1883)	73,000	26	7	15.38	11.44	—	3.85	3.85
Charleston	49,999	32	14	12.50	6.25	—	—	—
Nashville	43,461	21	6	23.80	19.04	—	—	9.52
Lowell	59,485	27	3	—	22.20	—	—	—
Worcester	58,295	11	6	9.09	72.72	9.09	—	—
Cambridge	52,740	26	10	30.77	23.08	19.23	—	3.85
Fall River	49,006	24	10	16.64	24.96	4.16	—	—
Lawrence	39,178	—	—	—	—	—	—	—
Lynn	38,284	12	4	8.33	—	—	—	8.33
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	10	3	—	—	—	—	—
New Bedford	26,875	10	1	30.00	10.00	—	—	—
Somerville	24,985	9	2	44.44	—	11.11	—	—
Holyoke	21,851	14	6	28.56	—	—	—	7.14
Chelsea	21,785	16	5	36.50	6.25	12.50	—	12.50
Taunton	21,213	6	1	—	—	—	—	—
Gloucester	19,329	3	1	—	—	—	—	—
Haverhill	18,475	13	3	23.07	15.38	23.07	—	—
Newton	16,995	3	0	66.66	—	66.66	—	—
Brockton	13,608	4	0	—	—	—	—	—
Newburyport	13,537	6	0	—	33.33	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	—	—	—	—	—	—	—
Eighteen Massachusetts towns	140,591	55	14	21.81	14.54	5.45	7.27	—

Deaths reported 2783 (no report from St. Louis): under five years of age 1004: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 542, consumption 415, lung diseases 385, diphtheria and croup 385, scarlet fever 97, measles 77, small-pox 62, diarrhœal diseases 56, typhoid fever 33, malarial fever 30, cerebro-spinal meningitis 26, whooping-cough 18, erysipelas 13, puerperal fever 12. From *small-pox*, New Orleans 52, Baltimore five, Philadelphia and Nashville two each, Chicago one. From *diarrhœal diseases*, New York 20, Chicago and New Orleans five each, Boston and Cincinnati four each, Baltimore, District of Columbia, Milwaukee, and Charleston three each, Chelsea two, Pittsburg, Buffalo, Providence, New Haven, and Chicopee one each. From *typhoid fever*, Philadelphia six, New York four, Buffalo and Milwaukee three each, Chicago, Boston, New Orleans, and Pittsburg two each, Brooklyn, Baltimore, Cincinnati, District of Columbia, Providence, Charleston, Somerville, Holyoke, and Chicopee one each. From *malarial fevers*, New York 14, New Orleans seven, Brooklyn four, New Bedford two, Baltimore, District of Columbia, and Nashville one each. From *cerebro-spinal meningitis*, New York eight, Milwaukee and Fall River three each, Chicago and Somerville two each, Boston, Baltimore, Cincinnati, District of Columbia, Buffalo, Peabody, Plymouth, and Westborough one each. From *whooping-cough*, New York six, Philadelphia four, Brooklyn and Holyoke two each, Chicago, New Orleans, District of Columbia, and Pittsburg one each. From *erysipelas*, New York, Baltimore, and Buffalo two each, Boston, District of Columbia, Pittsburg, Milwaukee, Providence, New Haven, and Worcester one each. From *puerperal fever*, Chicago five, Boston three, Cincinnati two, Cambridge and New Bedford one each.

Seven cases of small-pox were reported in Baltimore, Buffalo five, Pittsburg one; diphtheria 41, scarlet fever 27, typhoid fever five in Boston; scarlet fever 18 and diphtheria six in Milwaukee.

In 35 cities and towns of Massachusetts, with an estimated population of 1,078,331 (estimated population of the State 1,922,530), the total death rate for the week was 20.44 against 20.46 and 20.11, for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending May 5th, the death-rate was 21.7. Deaths reported 3580: acute diseases of the respiratory organs (London) 371, measles 81, scarlet fever 76, whooping-cough 74, fever 54, diarrhœa 50, diphtheria 21, small-pox (London and Birmingham two each, Liverpool and Cardiff one each) six. The death-rates ranged from 15.3 in Bradford to 31.1 in Hull; Leicester 18.5; London 19.8; Birmingham 21.1; Nottingham 23.8; Leeds 25.1; Liverpool 26; Manchester 29.1. In Edinburgh 16.4; Glasgow 31.4; Dublin 34.

For the week ending April 28th, in 170 German cities and towns, with an estimated population of 8,616,496, the death-rate was 26.9. Deaths reported 4459; under five years of age, 1994; consumption 734, lung diseases 611, diphtheria and croup 182, diarrhœal diseases 150, scarlet fever 72, measles and rötheln 64, whooping-cough 58, typhoid fever 39, puerperal fever 15, small-pox (Königsberg two) two. The death-rates ranged from 14 in Karlsruhe to 50 in Würzburg; Königsberg 37; Breslau 28.7; Munich 33.4; Dresden 26.1; Berlin 25.9; Leipzig 24.6; Hamburg 32.4; Cologne 23.8; Frankfort a. M. 20.7; Strasburg 28.2.

For the week ending May 5th, in the Swiss towns, there were 44 deaths from consumption, lung diseases 38, diarrhœal diseases 12, measles 11, diphtheria and croup four, whooping-cough two, scarlet fever one, erysipelas one, typhoid fever one, puerperal fever one. The death-rates were, at Geneva 13.3, Zurich 14, Basle 24.6, Berne 15.8.

The meteorological record for the week ending May 19th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
May, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 13	29.964	54	63	47	48	35	56	46	NW	W	NW	13	16	7	C	C	F	—	—
Mon., 14	30.026	49	64	44	52	48	100	67	NW	E	S	8	21	8	C	C	R	—	—
Tues., 15	29.641	46	52	41	100	93	93	95	NE	E	E	13	11	5	R	O	O	—	—
Wed., 16	29.908	50	59	44	86	66	63	72	N	SE	NW	4	8	12	F	F	F	—	—
Thurs., 17	30.158	52	62	41	63	49	66	59	N	SE	SW	10	11	11	C	C	C	—	—
Fri., 18	30.286	58	71	45	62	50	64	59	NW	SE	SW	9	8	2	C	C	C	—	—
Sat., 19	30.192	54	64	48	62	51	100	71	E	E	N	5	13	6	C	C	R	—	—
Means, the week.	30.058	52	71	41				67										15.40	.85

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; B., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MAY 18, 1883, TO MAY 25, 1883.

CAMPBELL, JOHN, lieutenant-colonel and surgeon, Medical Director of the Department of the South. Granted leave of absence for one month on surgeon's certificate of disability. Paragraph 3, S. O. 50, Department of the South, May 21, 1883.

BURTON, HENRY G., captain and assistant surgeon. Now awaiting orders at St. Paul, Minn., assigned to temporary duty at Fort Lincoln, D. T. Paragraph 1, S. O. 83, Department of Dakota, May 15, 1883.

PORTER, J. Y., captain and assistant surgeon. Assigned to duty at Fort Davis, Texas. S. O. 49, Department of Texas, May 14, 1883.

SPENCER, WILLIAM G., captain and assistant surgeon. Assigned to duty at Fort Hamilton, N. Y. Harbor. Paragraph 2, S. O. 83, Department of the East, May 14, 1883.

GORGAS, W. C., first lieutenant and assistant surgeon. Granted leave of absence for one month. Paragraph 6, S. O. 51, Department of Texas, May 17, 1883.

HOPKINS, WILLIAM E., first lieutenant and assistant surgeon. Assigned to temporary duty at Whipple Barracks, A. T. Paragraph 2, S. O. 44, Department of Arizona, May 14, 1883.

MACAULEY, CARTER N. B., first lieutenant and assistant surgeon. Assigned to duty at Fort Bennett, D. T. Paragraph 2, S. O. 83, Department of Dakota, May 15, 1883.

MCCREERY, GEORGE, first lieutenant and assistant surgeon. To report for duty to the commanding officer of troops in the field near San Bernardino Springs, A. T. Paragraph 1, S. O. 44, Department of Arizona, May 14, 1883.

RAYMOND, H. L., first lieutenant and assistant surgeon. Relieved from duty with troops in the field near San Bernardino Springs, A. T., and ordered to return to his proper station, Fort Apache, A. T. Paragraph 1, S. O. 44, Department of Arizona, May 14, 1883.

WILSON, GEORGE F., first lieutenant and assistant surgeon. Upon being relieved as post surgeon at Fort Townsend, W. T., assigned to duty at headquarters, Department of the Columbia. Paragraph 2, S. O. 64, Department of the Columbia, May 10, 1883.

WILSON, GEORGE F., first lieutenant and assistant surgeon. To report to First Lieutenant Frederick Schwatka, Third Cavalry, for duty in connection with explorations in the Department of the Columbia. Paragraph 3, S. O. 64, Department of the Columbia, May 10, 1883.

SUFFOLK DISTRICT MEDICAL SOCIETY. SECTION IV. — There will be a meeting on Thursday, May 31st, at eight o'clock, at 19 Boylston Place. Convallaria Majalis, by Dr. W. N. Bullard. The Adulteration of Certain Articles of Food, by Dr. C. Harrington. FRANCIS H. WILLIAMS, *Secretary*.

BOOKS AND PAMPHLETS RECEIVED. — The Symptoms and Diagnosis of Malaria in Children. By L. Emmett Holt, A. M., M. D., New York, Attending Physician to Northwest Dispensary in the Department of Diseases of Children. (Reprint.) New York. William Wood & Co. 1883.

Report of Proceedings of the Illinois State Board of Health, Quarterly Meeting, Chicago, April 12–14, 1883.

Answers to Inquiries about the United States Bureau of Education, its Work and History. Prepared under the Direction of the Commissioner by Charles Warren, M. D. Washington: Government Printing Office. 1883.

Lectures on Medical Nursing. Delivered in the Royal Infirmary, Glasgow. By J. Wallace Anderson, M. D., Lecturer on Medicine, etc., Glasgow. Second Edition. New York: Macmillan & Co. 1883.

On the Relation of the Chest Movements to Prognosis in Lung Disease, and on the Application of Stethometry to Examinations for Life Assurance. By Arthur Ransome, M. D., M. A. (Cantab.). With Illustrations. London: Macmillan & Co. 1882.

Deep Breathing as a Means of Promoting the Art of Song, and of Curing Weaknesses and Affections of the Throat and Lungs, Especially Consumption. By Sophia Marquise A. Ciccolina. Illustrated. Translated from the German by Edgar S. Werner. New York: M. L. Holbrook & Co.

Dr. G. Beck's Therapeutischer Almanack. 10 Jahrgang. 1883. Das taschenbuches der neuesten therapie 111 Bünschen. 1 Heft. Bern. 1883.

Fourteenth Annual Report of the Trustees of the Willard Asylum for the Insane for the Year 1882. Albany. 1883.

The Doctorate Address delivered at the Fortieth Annual Commencement Exercises of Rush Medical College. Held in Central Music Hall, Chicago, February 20, 1883. By Moses Gunn, M. D., LL. D., Professor of Surgery, etc. (Reprint.)

Dartmouth Medical College. Eighty-Seventh Annual Course of Lectures. Hanover, N. H. 1883.

One Hundredth Annual Catalogue of the Medical School of Harvard University, 1882–83. Cambridge: Charles W. Sever. 1883.

Practical Lessons in Elementary Physiology and Physiological Anatomy for Schools and Science Classes. By Dr. M'Alpine, F. C. S., Lecturer on Biology, Edinburgh, etc. Twelve Plates, with Practical Directions and Explanatory Text. London: Baillière, Tindall, and Cox. 1883.

Neuroses du Larynx. Leçons professés à l'hôpital de Lourcine en 1882. Par le Dr. Gouguenheim, médicin de l'hôpital Bichat. Recueillies par G. Morin, interne des hopitaux. Paris: Bureaux du Progrès Médical.

New Hampshire Medical Institution. Eighty-Seventh Annual Course of Lectures of the Medical Department of Dartmouth College, Hanover, N. H. Begins August 1, 1883.

The Proceedings of the Naval Medical Society. Museum of Hygiene, Washington, D. C., April 15, 1883. Yellow Fever at Norfolk and Portsmouth, Va., in 1855. By F. B. Stephenson, M. D., U. S. Navy.

Transactions of the American Medical Association. Instituted 1847. Vol. XXXIII. Philadelphia: Printed for the Association. 1882.

Alcoholic Inebriety from a Medical Stand-Point, with Cases from Clinical Records. By Joseph Parrish, M. D. Philadelphia: P. Blakiston, Son & Co. 1883.

The Tenth Annual Report of the Board of Health of the City of New Haven, 1882. New Haven. 1883.

Lectures.

RETROGRESSIVE HISTORY OF THE FŒTUS.

SECOND LECTURE IN THE COURSE ON EMBRYOLOGY AT THE HARVARD MEDICAL SCHOOL, 1883.

BY CHARLES SEDGWICK MINOT.

GENTLEMEN, — In our last lecture we traced the uterine development of the fœtus backwards to its commencement, to-day we must again do the same, but devoting attention chiefly to the fœtus itself, for the last time we were occupied mainly by the study of the various envelopes by which the embryo is surrounded.

You will have to break away from many habits of mind formed during the study of adult anatomy, and learn new ways of viewing the organs and the tissues, for in the adult the primary and essential relations of the parts are often concealed by secondary variations which have supervened during the course of development, and are not present during the embryonic period, or at least through all parts of it.

I know not how better to impress upon you the difference between the conceptions formed by a study of adult anatomy alone and the more correct views of human morphology gathered with the assistance of embryology than by communicating the following paradoxes, all of which will be justified during our subsequent lectures: —

The brain and the nerves are parts of the original skin. The striated muscles are epithelial structures, and in their origin and genesis are more nearly related to the ovaries and testes than to the smooth muscles. The skeleton is a secondary acquisition, fitted in after the other organs and tissues are quite far developed, and it is not the frame-work on which the soft parts are built. The vertebræ are not the true primitive axis (notochord), but are formed around it. There is a permanent gill opening identical with that of fishes; this opening is a long canal, which is divided by a secondary structure, a thin membrane, into an outer portion and an inner; the outer part is the meatus auditorius externus, the inner part is the tympanum and the Eustachian tube. The heart is part of the neck. We all have morphological tails. So we might continue, but there is enough to force home to you the conviction that you have still a great deal to learn about the principles in accord with which the human body is constructed.

It will be best to begin with a few remarks concerning the general arrangement of the tissues and organs of the body as ascertained by embryologists. In the first place there is a body wall composed of skin and other tissues, within which is a large cavity, known as the body cavity. In man and the higher animals this space is separated into two divisions, the thoracic and abdominal,[1] but in the young fœtus there is no such separation, for the diaphragm is not yet present. Finally there is an inner canal, the digestive tract, which traverses the body. This canal has various appendages which embryology has demonstrated to be derived from it. The most important are the lungs, liver, and pancreas. There is also another cavity, that of the pericardium, in which the heart is inclosed. The nervous system and the blood-vessels, and we may add the skeleton, enter into the composition of the general walls of the body, and in part also into the construction of the inner canal. Reduced to its most general expression, the body, from the point of view here adopted, is seen to consist of two tubes; one, the larger and outer, makes the external wall, the other, smaller in diameter, but much greater in length, and pursuing a very winding course within the outer tube, makes the digestive canal.

The tissues of the body may also be divided according to their connection with or independence of the nervous system. By the nerve fibres a great number and variety of cells, in glands, muscles, sense organs, ganglia, etc., are bound together into one association of a very intimate character. The combination may be called the neural union, and includes the large majority of the elements of the body. There are beside these a number of cells which are quite independent; this is, of course, true of the cells of the blood and lymph, whose ceaseless locomotion precludes the possibility of any organic connection with the nervous system. The class of independent elements probably includes nearly or quite all the members of the extensive group of connective tissues.

When, however, we penetrate deeper into the knowledge of human anatomy we learn that even these broad principles are not the fundamental ones, but that the basis of our bodily organization is the division into three layers. The discovery of this fact I have no hesitation in pronouncing the most important yet made in animal morphology, for it is the supreme governing rule in the organization not only of man, but of all known animals also, from the sponges up. The three layers have been designated according to their relative position — ectoderm, mesoderm, and entoderm.

The ectoderm of the adult comprises first of all the outer layer of the skin, the epithelial portion or epidermis. The dermis or cutis is not included. To the ectoderm also belong (2) the sense organs, that is to say the sensory and epithelial portions of them; (3) the entire nervous system, including alike the central organs, the nerves, and the spinal and all peripheral ganglia; (4) the epithelial lining of the mouth and a part of the teeth; (5) the anal portion of the intestine.

The mesoderm in bulk exceeds both the other layers, and, roughly speaking, comprises everything not lining the surfaces of the body or of the internal canal. It may be separated into two parts, the mesenchyma and the mesothelium. The mesenchyma is the name of that part of the mesoderm which is represented in the adult by the connective tissues, the blood, lymph, vessels of the circulation, and the smooth muscles. The term was first given by the brothers Hertwig to a very natural group of tissues. We shall have frequent occasion to employ it. The mesothelium is a new name, which I venture to propose for the epithelial portion of the middle germ layer. As you will learn hereafter, it is at first merely a continuous layer bounding the body cavity, but during development the peritonæum, the striated muscles, the excretory and the sexual organs are gradually differentiated principally from this layer.

The entoderm, like the ectoderm, is solely epithelial, and in the adult comprises chiefly the epithelial lining of the digestive canal (exclusive of mouth and anus) and its appendages. In fact, as you know, there is a continuous layer of epithelium beginning in the œsophagus, spreading over the inside of the trachea, bronchi,

[1] The pericardial cavity is also, properly speaking, part of the primitive body cavity.

and lungs, and descending through the stomach and intestine, and extending into the liver and the pancreas. Beside this vast, complex, but uninterrupted sheet of epithelium there is another portion, the thyroid gland, which, although it lies apart in the adult, yet is connected in the fœtus with the primitive entoderm from which it is really derived.

Organs are assigned, when classified on embryological data, to that primitive layer from which the essential constituent element is derived. Thus, although the liver contains blood-vessels and connective tissue belonging to the mesoderm, yet the characteristic and functionally most important members of the organs are the liver cells; since these are derived from the entoderm the whole organ is designated as entodermal. So likewise with the central nervous system, which is composed of tissues belonging to the middle layer and of the nervous elements proper, which last are ectodermal in origin, hence the spinal cord is an ectodermal organ.

Many organs move away from the positions in which they are first developed, as, for instance, is, as you are already aware, the case with the testes. It moreover is by no means infrequent to find a structure severed from its original connection, so that from the study of the adult alone it is impossible to assign all the parts correctly to the layers to which they really belong. Such a separation occurs, as has just been mentioned, in the case of the thyroid gland; as further examples we may add the ear, the pituitary body, the teeth, etc.

The mesoderm not only forms independent organs, wholly out of itself, but also supplements the other two layers. Thus in general it may be said that the mesoderm supplies connective and vascular tissue to whatever organs are developed, and it may intervene to separate by a secondary process, as in the case of the thyroid or the nervous system, parts originally connected.

You have then to remember that the body consists of two thin layers of epithelium, one covering the outside as the epidermis, and the other lining the digestive canal, and of a third very thick layer with numerous cavities and parts, filling the vast region between the two thin layers. You will learn more accurately hereafter that in the early history of every individual occurs a stage in which the body consists of undifferentiated cells, so arranged as to form not any definite organs but merely three layers, the primitive ectoderm and entoderm, with the mesoderm between them.

Besides these usual and satisfactory terms for the strata of the body, certain English writers employ the following: epiblast, mesoblast, and hypoblast. There is no advantage in using these new-fangled designations, which are the outcome of a singular tradition prevalent in England, which attributes to the crude products of manufacturing philology the value of a contribution to science.

The new-born child has so nearly the organization of the adult that its organs, with perhaps the single exception of the thymus gland, may be all readily identified by a student familiar with adult anatomy. The same cannot be said of the fœtus in utero. The further back we go the less resemblance with the adult do we find, while at the same time the simpler appears the organization.

In a fœtus from the sixth month any of you would probably be able to correctly identify all the organs, but you would find very different proportions from, and greater simplicity than, what you have seen in the adult. The head is proportionately much larger, the extremities smaller, and the abdomen bulges out much more than after birth. The abdomen protrudes chiefly because of the relatively enormous size of the liver, and indeed the liver very early acquires a prominence among the fœtal organs, which it retains during gestation, but loses after birth.[1] Anatomically examined the organs show a greater simplicity than in the adult. The teeth are not yet erupted but lie still imbedded in the jaw; the surface of the cerebral hemispheres is not convoluted but smooth; many parts of the skeleton exist not as bone but as the simpler tissue cartilage; thus we might proceed through all the organs, but we can obtain a far more impressive conviction of the simplicity, displayed by embryos, from the examination of a much younger stage.

I have here, gentlemen, a fœtus from the third month, — it still presents a distinctly human appearance, although from its small size (about seven centimetres in length) and the largeness of its head compared with its body it recalls the big-headed figures, which are so frequently delineated by the comic draughtsman. It offers a yet greater simplicity of organization than the embryo of the sixth month; it is, however, especially instructive to us, because at this age we find various parts united, which we are accustomed to think of as distinct. Thus the thyroid gland is united with the œsophagus, the germs of the teeth with the epidermis, so that the thyroid gland is seen to belong to the entoderm, the germs of the teeth to the ectoderm. I might lay before you other details, but let these suffice to direct your attention to the principal difference by which the young embryo is unlike both the mature embryo and the child. We might say epigrammatically that in the earlier stages two parts are in one — thus the thyroid gland and the œsophagus in the fœtus before you are still parts of a whole, the so-called *Vorderdarm* (fore-gut) of German writers. The combination of parts is the characteristic of early fœtal life, and the further back we go the more do we find this integration to prevail; hence the younger, the smaller a fœtus, the less are the organs divided off from the parent tissues in which they rise, and therefore the simpler again does the organization appear.

What I have just said is well illustrated by a fœtus of the second month, for it exhibits plainly the grouping into three layers, the cells of which are quite simple and but little differentiated in the direction of the multifarious forms found in the adult. In the first place the external configuration of the body is very different from what we have hitherto examined; the head is smaller, the limbs are hardly more than stumps, but there is an evident tail; the face, as you see in the specimen passed round, is strange indeed. As regards the internal organization: the intestine is quite short, has but few coils, and is of nearly uniform diameter throughout; the primitive kidneys and sexual glands constitute part of the dorsal wall of the body cavity.

An embryo of the fourth week displays a yet further reduction, — the strange figure it has is illustrated by the diagram before you, — its digestive tract is barely more than a straight canal from mouth to anus; there is no pancreas, no spleen nor genital organs recognizable by the unaided eye.

Much further back than this we cannot go in human

[1] The liver at birth makes nearly 4.4 per cent., in the adult 2.8 per cent. of the whole of the body.

history at present. But the earliest development of related animals has been investigated, and we are thus enabled to form a conception of what must occur in man. So we have learned to know stages, without ears, eyes, limbs, skeleton, stomach, liver, or genital organs; nearer the very beginning of embryonic life not even the head is formed, and the central nervous system, the spinal cord, and the brain is not surrounded by connective tissue and does not lie below the skin, but is united with the external layer of the body. A transverse section of a fœtus of a rabbit, for instance, in this early condition, is very instructive. Upon the outside is a covering of epithelium, the ectoderm, in the median dorsal line of which appears a furrow, where the ectoderm is thicker than over the rest of its extent; that thickening is the part which becomes the nervous system later. Lining the internal or digestive cavity is a second epithelium, composed for the greater part of very thin flattened cells, quite different from those found in the adult; they constitute the entoderm. Between these two layers is a thicker stratum of mesoblastic cells. All the cells at this stage are simple, and more or less similar one to another, — the multiplicity of tissues in the adult is here represented by cellular uniformity.

Thus is justified the division of the body in the adult into three layers, by the demonstration that in the germ there are three layers of undifferentiated cells, and that by gradual alteration and separation from these are derived all the structures of the adult organism.

The number of cells in the adult is many millions, but at the time when the germ is so small and so simple as the three-layered stage we have just considered there are obviously a vastly smaller number of cells, to be counted rather by thousands than millions. A little earlier and the number would be still smaller. At an epoch when there are only comparatively few cells, they form only two distinct layers, not even the mesoderm being then developed.

At a time not long, say two or three days, after impregnation, the number of cells is very limited, at most a few hundred. As we thus proceed retrogressively we reach a stage where there are but four cells; still earlier, but two; still earlier one single cell, the impregnated ovum, the parent of the entire body, the tiny primal ancestor of a countless progeny of cells.

We may carry the analysis yet further; the impregnated ovum is itself a compound of two distinct elements, the larger is the egg-cell, the female portion, the smaller the spermatozoon (or *zoa*, we do not know which). The act of impregnation is the union of the male and female products, hence the first cell which is thereby formed is unquestionably hermaphroditic, or, if we prefer so to call it, neuter. Now all the cells produced during development are the descendants of the original impregnated ovum by simple division, and are therefore also hermaphroditic or neutral.

I have been led by this and other facts to the view that there is a difference between the sexual elements and true cells; that when the sexual elements are developed from the cells of the genital glands the cells separate into their two constituents, the male part and the female part. In our next lecture the facts upon which this theory is based will be briefly laid before you. In accordance with the theory is the union of the two sexual bodies to make the cell, from which all the cells of the future body are to descend.

The division of the ovum for a short but indefinite period after impregnation is called "segmentation," a name still preserved, although the process is merely one of cell division. The act of impregnation induces a rapid and prolonged multiplication of cells, and that multiplication is the essential factor of growth.

Original Articles.

CASES OF INTERNAL STRANGULATION OF THE BOWELS. LAPAROTOMY.

A. B. ATHERTON, M. D., FREDERICTON, N. B.

Case I. L. H., male, aged fifty-six, farmer. Generally healthy. Never had any severe illness. On September 5, 1880, he ate a large quantity of choke cherries, swallowing the pits along with them. On the evening of that day he experienced some colicky pain in the abdomen, which increased rapidly in severity, and in a few hours produced vomiting, the latter continuing with the pain all night. Next morning he took a dose of cathartic pills, but vomited soon afterwards. A large quantity of cherries were ejected from the stomach by these repeated efforts of vomiting. Soon after exhibiting the pills enemata were given, which brought away a number of cherry pits.

On the 7th of September Dr. Benj. Coburn, who resides a few miles away, was called in, and he gave more enemata, and a dose of calomel and jalap. The former brought away more cherry pits, the total quantity from the first, vomited and passed per anum, being about a quart.

On the 8th the vomited matter became stercoraceous, and the cherry pits ceased to appear. During the night of the 8th a consultation was held with Dr. Coulthard, of Fredericton, and as a result the patient received more enemata, followed by one grain of opium with two of calomel, to be repeated every hour for eight hours.

On the morning of the 10th Dr. Coburn gave one and one half ounces of ol. ricini. This was retained for three hours, when vomiting occurred. Subsequently the dose was repeated by the friends, but was almost immediately thrown off the stomach. No passage through the whole of the bowels seemed to have been secured by any of these means.

During the whole period of illness the pain had been most severe on the left upper side of abdomen, also a good deal about the navel. For the last two or three days the tympanites and tenderness on pressure have been increasing. The extremities and general surface have been cold. Pulse about 80, and temperature under tongue nearly normal.

September 10th, 6.30 P. M. First seen by me with Dr. Coburn. Pulse, temperature, and skin found as above. On examination a small reducible hernia felt on left side. Impulse on coughing, and no local tenderness. No evidence of either sciatic or obturator hernia. Vomiting not so frequent as yesterday, and material thrown off not so fæcal in odor. As no enemata had been given through a long tube I introduced one about eighteen inches, and injected two quarts of warm water, which was all he could hold. Half an hour afterwards he was allowed to get up, and after a sitting of fifteen or twenty minutes about one and one half pints came away slowly, and with little force.

September 11th, six P. M. I visited patient again with Dr. Coburn. He has had several opiates since last evening, but symptoms have grown worse; vomiting more frequent and stercoraceous. No cherry pits seen since yesterday morning.

Laparotomy was now advised, but before the patient and relatives could make up their minds to it darkness had come on, and the operation had to be done by lamplight.

Patient had urinated freely at two P. M., and was now asked to do so again before being chloroformed. About half a pint was passed.

Operation. Chloroform given, and operation begun in a seven-by-nine bedroom, assistance being rendered by Dr. Coburn, Mr. J. G. Owens (my medical student), and one or two friends of the sick man.

A longitudinal median incision, four or five inches long, was made below the umbilicus. The deep part of wound was made with extreme care, but just as I opened the pertonæum, at lower end of incision, I think I must have nicked the fundus of the bladder, judging from the character of the fluid which flowed out, and from the fact that I could enter the tip of my finger into what I took to be that viscus. A considerable amount of fluid also at the same time issued from the peritoneal cavity, and I was consequently unable to judge very well as to the quantity coming from the bladder. The wounded point of the latter seemed to be just where the peritonæum is reflected from it on to the abdominal wall. I immediately closed the opening by a continuous silver suture, and then proceeded to overhaul the congested and protruding intestine. I found a loop of apparently the lower part of descending colon, about five inches in length, which was more deeply congested than the rest. This was twisted on itself, and held in that position by some bands of thickened peritonæum at its base or neck. These last I nicked cautiously with the knife, and then was able to untwist the loop of gut. Pressure on the distended bowel caused its contents to fill the contracted sigmoid flexure below, showing a free passage downwards.

After returning with considerable difficulty the swollen bowel into the abdominal cavity I closed the wound with silk sutures, leaving three fourths of an inch of its lower part open, and as far as possible shutting off the peritoneal cavity from the wound in the bladder; a short piece (about one half inch or more) of drainage tube was inserted here; a gum elastic catheter with a piece of rubber tubing attached was fastened in the bladder, and wound dressed à la Lister.

September 12th, five P. M. Stercoraceous vomiting occurred again just after coming out of chloroform, but since then no such odor has been present in vomited matters. Patient has taken only a little milk and water, also has had about one half grain of morphia since the operation, and has rested well. No bloody color in urine passed. Expresses himself as feeling less pain, but very weak. Pulse 88; temperature 97.6° F. Wound dressed under carbolic spray. Looking well. Drainage tube removed.

September 13th, five P. M. Has required one half to three fourths grain of morphia in last twenty-four hours. Slept well. Not much nourishment taken. Pulse 90; temperature 97.6° F. No discharge visible on dressings. No evidence of urine except via catheter. Ordered brandy in small quantities frequently repeated, together with nutrient and stimulant enemata every six hours.

September 14th, five P. M. Bowels moved naturally once or twice since yesterday for the first time. Abdomen much less distended. Very little vomiting since yesterday. Pulse 84; temperature 97.5° F. To have more food and stimulant by mouth, and less by rectum. Opiates *pro re nata.*

September 15th, 9.30 P. M. Two or three motions of bowels since last visit. Abdomen flat. Pulse 104; temperature 98° F. Wound dressed for second time since operation. An erysipelatous blush is present about edges of wound, and a very dark stain is found on oiled silk protective. A fæcal odor noticed from dressings. Three or four sutures removed to permit of free escape of fæcal matter.

This was the last visit I made patient, as I was obliged to be absent from town for a few days. I am indebted for the rest of the report to the kindness of Dr. Coburn.

September 16th. Wound dressed by Dr. Coburn and remainder of sutures removed; about same quantity of fæcal matter as yesterday found on dressings. Patient seemed sinking.

September 17th. Dressed. No gaping of wound. No urinary discharge on dressings.

September 18th, A. M. Died.

No autopsy obtained.

Remarks. The accident which befell me in operating in this case shows clearly the necessity of passing the catheter in *every* instance before performing laparotomy. Luckily, however, I think the fatal result cannot with any probability be attributed to the escape of urine into the peritoneal cavity, for there was a free gush of peritoneal fluid at the same time that the urine flowed out, and I was careful to close the opening in the bladder at once. Besides, the swollen and distended bowel filled so completely the abdominal cavity that there could not much urine enter it, and such as might come in contact with the gut would be pretty well diluted by serous fluid.

The cause of death, I suppose, must have been the sloughing of the deeply congested and long strangulated loop of intestine, and the consequent extravasation of fæces into the abdominal cavity.

(To be concluded.)

RECENT PROGRESS IN OPHTHALMOLOGY.

BY O. F. WADSWORTH, M. D.

PERIPHERAL AND CENTRAL DISTRIBUTION OF THE OPTICUS FIBRES.

GAUSER[1] confirms and extends the opinions advanced by Guelden and others as to the course of the optic nerve fibres from brain to retina. Experiments on cats, made by removing one eye and tearing across the optic tract on the same side a few days after birth, and allowing the animal to grow up, showed, (1) that the cat could see only with the temporal half of the retina which remained to it; (2) that this loss of vision interfered with the psychical development of the animal even more than the removal of a large part of one hemisphere; (3) that in this animal the course of the uncrossed nerve fibres is along the lateral side of the nerve and chiasma, and that these fibres enter the eye only in the outer two thirds of the scleral opening, and are distributed to the temporal half of the retina;

[1] Archiv für Psychiatrie, Bd. xiii.

(4) that the above injuries do not interfere with the development of the hemispheres, but do hinder the development of the outer corpus geniculatum and the anterior corpus quadrigeminum on the side of the injury.

Removal of the cortex in the occipital region of one side soon after birth caused in the adult animal hemianopia of both eyes, with corresponding atrophy of one side of the papillæ, atrophy of the tractus on the side of the injury, and partial atrophy of both nerves.

Farther experiments demonstrated that the superficial white substance of the anterior corpus quadrigeminum is in direct connection with the opticus; the more central white substance of this ganglion, in part, at least, in direct connection with the cerebral cortex.

THE PHYSIOLOGY OF HAND-WRITING.

Berlin[1] gives the results of an examination undertaken by a committee appointed by the Wurtemburg government to investigate the influence of the ordinary slanting style of writing on the eyes and bodily position of the school children. From observations made in the schools it appeared there were three more or less distinctly separated typical attitudes taken by the child while writing: —

(1.) A relatively erect posture, with a considerable distance between the face and the book, and the pelvis nearly parallel to the edge of the desk. (2.) The head and spinal column bent to the left, the face at a less average distance from the book, and the pelvis either (*a*) inclined obliquely to the left or (*b*) nearly straight. (3.) The head bent to the right, the face nearer the desk and book, the pelvis inclined obliquely to the right.

The last attitude was much the most common, the first less frequent, the second observed with but few. All the children stooped forward more or less, least in the first, most in the third, attitude. There was also a little turning of the head to the right, so that the left eye stood nearer the desk, best marked in No. 3.

A constant relation was found between the attitude and the position of the copy-book. The line joining the centres of the eyes, — the base-line, — when projected upon the page at the place where the pen point rested, crossed the line of the manuscript at a considerable angle, running from the left and above to the right and below. To this rule the exceptions were less than two per cent., in these the base-line crossed from down and left to up and right. Never was there found parallelism between base-line and lines of copy-book. It appeared farther that the relation of this base-line to the lines of the book determined the attitude of the writer, in other words, the position of the book determined the position of the whole body.

In attitude No. 3 the page always was on the right side, its lines parallel to the edge of the desk. With this position of the page, to comply with the rule as to crossing of the base-line, it was necessary that the left eye should be farther forward, and this was effected partly by inclining the head to the right, partly by right obliquity of the pelvis.

In attitude No. 1 the lines of the page ran from left down to right up, the page being either to the right or in front. Here the customary relation of the base-line to the lines of manuscript required that the base-line should be nearly parallel to the edge of the desk, and this was attained by the assumption of a relatively upright position of the body.

In attitude No. 2 (*a*) again the book was placed very obliquely, so that its lines made an angle of much more than 45° with the edge of the desk. This position required that the base-line incline to the left to preserve the characteristic angle, and to effect this the head was bent to the left and the pelvis swung in the same direction.

The constancy in the relation of the base-line to the lines of the writing-book naturally led to the question, What is the law which prescribes the direction of the base-line? This question seems satisfactorily answered by the discovery, as the result of numerous careful measurements, that the downstrokes of writing make an angle of 90° with the base-line. Yet there are infrequent variations from this law, and in two directions. On the one hand the angle between downstroke and base-line is much greater than 90°, ranging to 120° and more, on the other hand much less, to 50°.

In the first of these groups it was found that instead of the downstrokes, the upstrokes formed a right angle to the base-line; in the second group the upstrokes were parallel to the base-line. The cases of this last group are identical with those above mentioned in which the base-line crossed the manuscript from left down to right up, and in which attitude No. 2 (*b*) was assumed.

These general results were obtained by examination of more than 300 children. Farther observations and measurements were made on 562 other pupils of various ages, and attention was given also to many other details. Berlin only discusses here the data which serve to explain the influence which the laws governing the movements of the eyes have on the act of writing. The difficulty of measuring accurately the angle made by the downstrokes with the base-line proved to be considerable. Yet the results were on the whole so constant that this angle is regarded as the cardinal point in the physiology of writing. Of 371 measurements ninety-three per cent. gave approximately a right angle between the base-line and the downstrokes, but few deviating considerably from this, and the average being 85.5°. In five per cent. the upstrokes stood at a right angle to the base-line. Finally, in two per cent., the upstrokes were parallel to the base-line. The committee believed, therefore, that ninety-three per cent. of the writers followed the downstrokes with the eyes and in a direction perpendicular to the base-line; seven per cent. followed the upstrokes, five per cent. perpendicularly to the base-line, two per cent. parallel to it.

A peculiarity was observed in the writing of those individuals in whom the angle between base-line and downstrokes was much less than 90°, which seemed of importance. The longer strokes above the lines of the paper were concave toward the left, sometimes also the strokes below the line were concave to the right, so that the whole stroke approached an *S* form.

The explanation of this phenomenon, as well as of the usual relation of the base-line to the downstrokes, and, exceptionally, to the upstrokes, is found in the established laws of ocular movements. Only when the eyes move vertically or laterally do the visual axes follow straight lines; when the movement is diagonal their path is a curved one. The hand of the child in writing follows the same path as the eyes; it can, therefore, form the straight down or up strokes only by

[1] Archiv für Ophthalmologie, Bd. xxviii., Heft 2.

moving vertically to the base-line, or, exceptionally, parallel to it. When it tries to form the strokes in a direction diagonal to the base-line they become often involuntarily curved. Only by a few, however, is this attempted. Usually the child twists head and body to bring the base-line into the position in which the strokes can be most easily made straight. If, then, the book be held nearly parallel to the edge of the desk, head and body will be kept continuously turned to the right, and this position will tend to cause spinal curvature, and, through speedy tiring of the muscles of the back and consequent approximation of the eyes to the book, myopia.

The conclusion is reached that the act of writing is dominated mainly by the laws of ocular movements. With the lines of the copy-book parallel to the desk edge the child *must* sit twisted to the right; with the book inclined obliquely to the left he *can* sit erect; while if the obliquity of the book be excessive, he must twist toward the left.

Of 514 children in about eighty per cent. the left eye was nearer the desk than the right, the maximum being thirty-five millimetres; in five per cent. the right eye was nearer, in fifteen per cent. the distance of both eyes was the same. The degree to which the eyes were directed upward or downward in relation to the plane of the face was also measured. In three per cent. only was the direction of the gaze above the horizontal; the average direction was 20° downward.

As to the most important point, the perpendicular direction of the strokes to the base-line, these observations agree with those of Weber; in other details they differ from his conclusions.

GLIOMA OF THE RETINA.

Vetsch [1] writes on twenty-four cases, which, with one previously published, include all of those recorded as glioma in Homer's clinic, and brings out several points of interest. The result was ascertained in all cases up to the date of writing.

From examination of traced-out preparations he found that, beside the round cells usually described, there were also polymorphous and brush-shaped or spider cells with long processes. The latter two forms were the more frequent the fresher was the specimen, and he concludes, therefore, that the hardening fluid tends to alter the original shape of the cells. Although these cells have been seen and described by some other observers, most writers on glioma of the eye seem to have missed them.

Three of the cases showed the occasional difficulty of diagnosis. Two of these proved not to be glioma, one on anatomical examination, the other because the patient was well at the end of eight years, although the eye was not removed. In both the diagnosis of glioma was made by several observers. A third case was for a time supposed to be one of suppurative irido-choroiditis. Neither the tension nor the previous history of meningitis can always be relied on for differential diagnosis. In the two cases not glioma tenison was increased, while in four cases of glioma it was not increased. In two cases of glioma, moreover, there was a history of previous meningitis.

The relative frequency was about 0.03 per cent., twenty-three cases in 75,000 patients.

Megalocornea, a hitherto undescribed symptom, was noted in seven cases, and was accompanied by enlargement of the whole globe in three. This is attributed to increase of tension acting on the eye while still quite young.

In eight cases not operated on the average duration from the time the tumor was first noticed till death was sixteen months. The occasional slow progress of the disease was illustrated by one congenital case, the child living sixty-four and one half months.

Of thirteen operated cases, five were living. In one, with perforation of the sclera but free orbit, three years after enucleation, a gliomatous tumor appeared in the parotid of the same side; a year later this was removed, and at the end of another year the child was well. In a second case, after three years, there was a tumor in the other eye, but no local return. In one only eight months had elapsed since enucleation. Two cases were well after periods of seven and nine years. The first two of these cases show that a longer time than has generally been considered necessary must be allowed before freedom from recurrence can be assured. The importance of early removal is emphasized by the fact that of the eight cases dying after operation in five symptoms of extraocular growth, protrusion of the eye, were already present, and in the remaining three the disease was far advanced.

[1] Archives of Ophthalmology, xii., 1.

METASTATIC CHORODITIS FOLLOWING EXTRACTION OF A TOOTH.

Dinnuer [2] reports the case from Arlt's clinic. A boy of thirteen years had a carious tooth extracted from the lower jaw with some difficulty. Two days later there was much painful swelling of the gums and cheek, followed by pain in the neck and trouble in swallowing, which in a few days began to subside; but two weeks after the extraction the boy had chills, repeated several times daily. This did not, however, prevent attendance at school. Soon he noticed one day on leaving school a blur before the right eye. The next day redness and swelling of the lids, loss of sight, and protrusion of the eye, without much pain. The boy was first seen two weeks after the first symptoms in the eye. The swelling was already diminishing, and for some days pus had flowed out between the lids. The eye was still prominent, soft; the cornea slightly hazy; gray exudation covered the pupil; one centimetre from the cornea, between the internal and superior rectus, was a perforation of sclera and conjunctiva, through which pus exuded on pressure. There was no longer any swelling in the place from which the tooth had been removed, but the cervical glands on that side were enlarged, and there was a little enlargement of the spleen. Temperature was now normal, and no fever. The eye gradually shrank.

OPERATION FOR CONGENITAL PTOSIS.

Eversbasch [3] recommends the following method of bringing forward the levator of the upper lid in congenital ptosis: The plate of the blepharostat of Snellen is pushed high up behind the lid. Before the half ring is clamped on the outer surface of the lid the skin is drawn down by the finger as far as possible toward the ciliar edge so that, when the screw is tightened, not merely the tarsal portion of the lid, but its whole height to the fornix on the conjunctival side and to the skin of the forehead in front, is included in the instru-

[2] Weiner medizinische Wochenschrift, No. 9, 1883.
[3] Klinische Monatsblätter für Augenheilkunde, März, 1883.

ment. Then an incision, parallel to the lid edge and half way between it and the brow, is made nearly the whole breadth of the lid through the skin and the orbicularis muscle. Skin and orbicularis are dissected up from the tissues beneath for a width of four millimetres upward and downward, uncovering the superior fornix and the insertion of the levator into the tarsus. Next, with a thread armed with two needles, a suture is passed transversely through the centre of the insertion of the levator, so as to include a portion two and one half millimetres wide, and the two ends of the thread are carried down along the anterior surface of the tarsus to emerge at the lid edge behind the cilia, and two or three millimetres apart. Similar sutures are inserted at the nasal and temporal sides of the levator insertion. Before drawing these sutures tight the wound in the skin is united by sutures and the blepharostat removed. The vertical sutures are prevented from cutting into the lid edge by beads. A protective bandage is to be worn over both eyes till the wound in the skin is healed, and the sutures removed before they have excited suppuration.

Eversbasch believes this method to be as effective and more simple and safe than division of the levator before bringing it forward. He has operated in three cases, and claims to have attained a large degree of success in all.

Reports of Societies.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. M. BUCKINGHAM, M. D., SECRETARY.

MAY 28, 1883. DR. CHARLES D. HOMANS presided. DR. KNIGHT reported a case of

LYMPHO-SARCOMA OF THE LUNG.

The patient, a man of sixty, was first seen May 8th, complaining of cough that had lasted six months, and of dyspnœa that had been especially troublesome for two or three months. Physical examination showed decidedly feeble respiration in the left chest, with dullness under the left clavicle, increasing toward the sternal notch, and led him to suppose that a tumor existed, pressing on the primary bronchus of that side. It remained to be seen whether the tumor was an aneurism or was malignant. An abnormal distribution of the radials led to inequality of the pulse, but this source of error was eliminated at the next visit, a week later. Then, instead of good resonance over the back, as before, percussion was flat on the left side. There was, however, no displacement of the heart. In view of the possibility of a limited secondary effusion, although the presence of fluid was not certain, aspiration was done in company with Dr. L. R. Stone, of Newton, where the seventh interspace crosses the posterior axillary line. About one ounce of thick fluid was removed, unlike anything previously seen by Dr. Knight. This was examined microscopically by Dr. E. G. Cutler, who decided it to be malignant. It afterward proved to have come from a pulmonary and not from the pleural cavity. The patient steadily failed, and died.

DR. STONE said that the aspiration was on Thursday. On Friday there was dyspnœa in the morning, but the patient slept at night without an opiate. On Saturday he drove for an hour. Sunday was passed comfortably, going to bed at nine. There was a rattling cough at night, and much offensive expectoration. Fine crepitation now appeared under the left clavicle, with coarse crepitation over the rest of the front. Flatness continuing in the back. By Tuesday there were coarse râles all over the left side, back and front, and fine râles were no longer heard. The patient died at midnight, there having been no rise of temperature and the pulse averaging 120.

DR. E. G. CUTLER, who had made the autopsy, said that death was due to gangrene of a small portion of the left lung and to œdema of the right lung. The left pleura, both parietal and visceral, was quite thick, and was attached everywhere, except laterally near the base of the lung over a space nine by five centimetres, where about an ounce of purulent fluid was found inclosed by shreddy fibrinous walls. On incising the lung a large wedge-shaped cavity of gangrenous odor and worm-eaten, brittle edges was found running from the root out to the surface of the lung, and of about the size of the fist. The rest of the lung was uniformly solidified and of a reddish-gray color. The bronchial glands were very much enlarged, especially at the root of the lung, and formed tumors of some size; there was, moreover, a grayish vascular new growth outside them, and running along the primary bronchus, somewhat larger than a hen's egg. This had pressed upon and diminished the size of the bronchial tube very considerably, and in several places had broken through into the interior, and appeared on the mucous surface as irregular excrescences. The gangrenous portion of the lung was supplied by a bronchus which was very much encroached upon by the disease. A microscopic examination of the new growth showed it to be composed almost wholly of cells, the large spindle-shape predominating, though there were many others, both round and irregular. Large numbers of lymphoid cells also existed. A number of giant cells were seen, and many cells contained pigment. The solidification of the lung was found to be due to the presence of round, indifferent cells, and large pigment-holding epithelial cells in the alveoli. The new growth was considered to be lympho-sarcoma. There was nothing of importance in the other organs.

DR. KNIGHT mentioned that he had never seen such marked resistance to percussion in consolidation of the lung, but only with effusion or new growth.

DR. BOLLES read a paper on

THE MEDICINES OF TO-DAY,

of which the publication has been reserved.

DR. EDES spoke of the effect of habit or whim in determining the choice between two similar drugs as being, probably, in some cases as great as any idea of their comparative value. He offered in example the subcarbonate and subnitrate of bismuth, also quinine and some of its substitutes. He thought it would be interesting to note the preferences in such cases in somewhat widely separated cities.

DR. E. T. WILLIAMS showed a

CONTRIVANCE FOR DILATING THE OS UTERI BY ELASTIC PRESSURE.

He said it was intended as a substitute for sponge tents and the various water dilators. His apparatus consisted of a soft rubber bulb and flexible tube, a pair of compressing splints, and an elastic rubber band.

The bulb, being filled with water, was to be connected with a Barnes's bag or any other water dilator. This being inserted into the cervix, compression was to be applied to the bulb by means of the splints and elastic band, and the instrument left in position to do its own work. Compression could be graduated to fit the circumstances of the case.

The means of connecting the Barnes's bag with the tube from the bulb was by a screw on the tube, fitted to hold the small nozzle of a Davidson's syringe, which nozzle was to be slipped into the tube of the dilator and securely tied in.

Connection could also be made with Emmet's dilator, shown on page 35 of his work on Gynæcology. The upper part of the instrument being carried beyond the os internum, necessarily bulged into the cavity of the womb, thus forming a sort of head, like the head of a nail, which kept the dilator from slipping out. No portion of the bag should be permitted to protrude below the external os, for if this happened bulging would occur at this point and tend to draw the dilator out of the uterus. The same thing happened with sponge tents if not cut off even with the os. The chief defect in Emmet's instrument is the insecurity of the button clamp by which the bag is secured to the tube, which will not stand the necessary amount of pressure.

Dr. Williams then showed a substitute for Emmet's instrument, consisting of a flexible rubber tube with a perforated wooden spool-shaped tip, and over the tip two rubber finger-cots secured with twine. The inner cot was intact and intended to be filled with water; the outer had a hole for the introduction of a sound, which, being pushed up between them, served to introduce the instrument into the uterus. This took the place of the "sleeve" of Emmet's dilator. The sound could be removed when the bags became fully engaged. The objection to all these instruments was their bulk, which prevented their use except when some dilatation existed already.

For the normal non-pregnant os something smaller was needed, and the speaker showed a metallic intra-uterine syringe tube, with a screw to fit the bulb tube already described. Over the end of the silver tube a rubber cot was tied. A slight swelling of the tube, two and a half inches from the end, would keep the cots from slipping off. Some small cots, made for the speaker, were shown, having a diameter of a quarte, a third, and a half, inch. These might be inserted like a sponge tent. The tendency to slip out of the uterus could probably be prevented by packing the vagina or by tying in the syringe tube like a catheter. The speaker had had no satisfactory opportunities of testing the apparatus. He showed it to the Society in the hope of inducing others to make trial of it. He hoped, however, that it might prove effective both as a means of slow and of rapid dilatation, and was inclined to think that much might be accomplished by elastic pressure with little or no pain. Should circumstances require it powerful compression could be used under ether, and probably as rapid dilatation made as with any other instrument.

DR. WING said he thought Dr. Williams had hit on the true principle, steady continued pressure exerted more efficiently than by the sponge tent, and more easily than by any other known method. Barnes's is the best as yet, but it is inefficient. As the only dilating force in Barnes's dilator is the elasticity of the tube, it is soon exhausted, and after a little dilating there is no more effect. The fountain syringe might be used. Dr. Williams's method has an advantage over the finger for rapid dilatation, that it saves the operator's muscles.

DR. WARREN said that he thought Dr. Wing's suggestion of the fountain syringe a good one. An advantage is that the pressure can be regulated to a nicety by raising or lowering the bag. He has had experience with it in applying pressure to an irreducible hernia. Pressure may be kept up for hours.

DR. JOHN HOMANS said that he had got the best results from hard-rubber sounds of different sizes. With these he had dilated the virgin os to the size of the thumb. It does not do harm, and with ether it can be done at once. A series of thirty or forty sizes of polished sounds is needed. Dr. Williams's method, if it can be managed, will be excellent. It should have been mentioned that the tupelo tent is never offensive.

DR. WILLIAMS said he thought his elastic more manageable than the water column in the fountain syringe. Unless there is hurry slow dilatation is best.

CONNECTICUT MEDICAL SOCIETY.

NINETY-SECOND ANNUAL CONVENTION.

THE annual convention of the President and Fellows of the Connecticut Medical Society was held at Hartford, May 23d and 24th, in the Common Council Chamber. The session was well attended, forty Fellows out of a possible fifty-three being present at the business session on Wednesday afternoon. The session commenced promptly at three with the usual

ADDRESS OF WELCOME

by the President, which also by rule contains such suggestions as he sees fit to make for action by the members. After alluding to the present prosperity of the Society, and its duties to the profession and the State, he called attention to the following topics as worthy of attention: (1.) The legal status of the Society. There is a question whether in the revision of the charter of the Medical Department of Yale College in 1879 the charter of the Society was not repealed, as the two were incorporated by a joint act. (2.) Some changes may well be made so as to allow all ex-presidents to be permanent Fellows; they might be called councillors, and have charge also of all matters of discipline. (3.) The secretary, and perhaps the treasurer also, should be a permanent officer, and should receive some salary. (4.) The number of Fellows should also be increased. He deprecated the frequent use of untried remedies, and suggested a standing committee of four to report annually on such as were of value. He announced that the present secretary, from the press of other business, could not continue longer in office, and spoke in high terms of his services to the Society. The work of the State Board of Health was indorsed, and several points specialized. He also deprecated the tendency to exalt specialists, and gave the full meed of praise to the general practitioner, especially in the country, who is obliged to meet all emergencies unaided by any but his own resources. In conclusion he spoke of the Code as an instrument that had nearly outlived its influence, and would be superseded by a higher standard as medical education advanced.

COMMITTEE ON THE STATUS OF THE SOCIETY.

The usual routine of business followed, including the appointment of committees to carry out the suggestions of the President. There was considerable discussion concerning the manner in which the one relating to the status of the Society should be appointed, and when it should report, as it was somewhat uncertain how much might result from its action. The Medical School has for some time been growing restive under its union with the State Society, as all degrees are granted jointly. In 1879, when their charter was revised, it was enacted that this union could be dissolved by mutual consent without any farther legislation. It was thought from a recent newspaper article that such action would be proposed at this convention, but it was not directly. After discussion of the action of the committees in 1879, and the results of independent action, it was resolved that this one should report to a special meeting, to be called by the President, and that its members should be selected by the Fellows from each county. The following committee was chosen: Dr. C. W. Chamberlain, Prof. W. D. Carmalt, Drs. F. N. Braman, G. F. Lewis, H. W. Buel, E. A. Hill, G. W. Burke, A. R. Goodrich.

AMENDMENTS TO BY-LAWS.

Several amendments to the By-Laws were proposed and accepted for final action next year, as follows: (1.) No resolution shall be received that is not legibly written without interlinations or erasures. (2.) All remarks shall be written either before or at once after they are made, and the Secretary shall, at the expense of the Society, provide appropriate tablets for this purpose. (3.) No voluntary paper shall be published unless it has been read before some county medical association. (4.) That each county society shall elect a member of the Nominating Committee and his alternate, and shall also elect alternates for each Fellow to secure a full delegation.

PROPRIETARY MEDICINES.

It was also voted to memorialize the Legislature for a law that no patent or proprietary medicine shall be allowed to be sold in this State unless the formula is plainly printed on the label, under a heavy penalty if its composition is found, on analysis, to differ essentially from the formula.

THE ARMY MEDICAL MUSEUM AND LIBRARY OF THE SURGEON-GENERAL'S OFFICE.

were indorsed in a series of resolutions, which declared their value to the whole medical profession, deprecated their separation or being placed under any other control. It was recommended that, through our representatives, we appeal to Congress for a sufficient appropriation for a fire-proof building large enough for present and future needs, an annual appropriation for purchases of books and periodicals and care of the collections of not less than $15,000, and a sufficient appropriation to continue the publication of the Index Catalogue until finished.

THE REPORT OF THE TREASURER,

Dr. Swasey, shows a balance of $640 in round numbers, and no arrears in any county back of the current year's tax.

ELECTION OF OFFICERS.

The Nominating Committee reported the following list of officers, who were elected by ballot: President, Dr. E. B. Nye, Middletown; Vice-President, Dr. B. N. Comings, New Britain; Treasurer, Dr. E. P. Swasey, New Britain; Secretary, Dr. S. B. St. John, Hartford; Committee on Matters of Professional Interest, Drs. W. C. Wile, J. H. Granniss, and E. C. Kinney; Examining Committee, Drs. George F. Lewis, (Bridgeport) and M. Storrs; to Nominate Professors to Yale Medical School, Drs. J. G. Stanton and J. B. Kent; to Nominate Physicians to the Insane Retreat, Drs. R. Hubbard and R. W. Matthewson; Committee on Publications, Dr. I. W. Lyon; Committee on Arrangements, Drs. J. P. C. Foster, C. P. Lindsley, and S. H. Chapman; Dissertations, Dr. N. E. Worden; Alternate, Dr. W. H. Holmes. Delegates to other medical conventions were chosen. When the delegates to the New York Medical Society were reached it was voted to lay the nomination on the table on account of the present attitude of that Society towards the American Medical Association.

REPORTS OF COMMITTEES, ETC.

The Committee on County Resolves, to which a complaint against the Publication Committee had been referred, reported that it was the duty of that Committee to decide upon the publication of voluntary papers, but a difference from their opinions alone was not a sufficient cause for rejection. On motion of Dr. Chamberlain the report was accepted.

The Committee on Honorary Members reported favorably on the name of Dr. John S. Billings, Assistant Surgeon-General, U. S. A., who was elected unanimously. The names of Dr. James E. Reeves, of West Virginia, and Prof. T. A. Emmet, of New York, were favorably reported for action next year.

The annual tax of two dollars was assessed, and it was voted to publish seven hundred copies of the Proceedings.

The Committee on the Law relating to Coroners reported that no concerted action had been taken by the committee, but all the members had worked efficiently, each in their own way, with a result that the Society and State might well be proud of, as the need for revision was well known.

DR. CHAMBERLAIN spoke of the part taken by the State Board of Health, and of the work of Drs. Porter and Charland, each of whom had visited Boston several times to learn of the details of the Massachusetts law, and learn what improvements were suggested, if any, by the practical workings of that law.

The Committee on Revision of the Code reported that such action, if any were needed, should emanate from the American Medical Association.

The Society then adjourned. During the evening there was a pleasant reception given by the Hartford City Medical Society at the United States Hotel.

THURSDAY.

The morning session commenced with the

SECRETARY'S REPORT,

which showed the usual gain in membership. The death-rate was still large, the Society losing fourteen active members. Among these are names that will long be remembered. Dr. George B. Hawley, in the

Hartford Hospital and the Old People's Home, leaves an enduring monument, and the reputation of Dr. E. P. Bennett as a surgeon is not bordered by the lines of his State, while the cheery presence of others, long regular attendants at these gatherings, will be not soon forgotten. In leaving the office held for eight years, which the press of other duties rendered necessary, he desired to thank the Society for their cordial support, that enabled him to leave the Society in such prosperous circumstances. During this period of eight years there have been eighty-six deaths, yet the net gain in membership has been a little over one hundred, and the Society in general was never in a more satisfactory condition.

PROFESSOR WHITE moved that the thanks of the Society be voted to Dr. Chamberlain for his long, faithful, and arduous services as Secretary.

DR. WHITE moved as a substitute for this resolution that a committee be appointed to draft suitable resolutions, and have them engrossed, to present to the Secretary as a testimony of our appreciation of his services. The substitute was accepted by Professor White and passed unanimously.

The PRESIDENT then presented the

ANNUAL ADDRESS, ON THE COUNTRY DOCTOR,

a humorous pen picture of the checkered life of this member of the professional ranks, whose salient touches elicited frequent applause. A brief extract may give some idea of the plan of treatment: —

> Each day he stood beside some prostrate form,
> Whose outstretched hand and trusting look gave warm
> And kindly welcome, while he sought to show
> The brighter side and hide the threatened woe.
> 'T was his to know the rapture of success;
> 'T was his to feel the pangs of bitterness,
> When, baffled, he must stand with bated breath,
> Dumb and confounded, face to face with death.
>
> We take their places, and survey with pride
> The well-earned laurels they have laid aside.
> If their facilities were less than ours,
> We gain advantage, not by added powers
> For better service, but by nobler deeds, —
> More self-devotion to our fellows' needs.
> Who does his best within his humble field
> Has gathered honors, which he need not yield
> To man or angel; faithful in few things,
> He wears the crown which faithful service brings.
> None wears another's armor, each his own;
> Ours will be measured when our work is done.

RECEPTION OF DELEGATES.

The following delegates from other State Societies were then introduced by the President, who briefly addressed the convention, presenting the kind wishes of their respective Societies: Dr. G. J. Townsend from Massachusetts, Dr. A. G. Browning and Dr. Charles O'Leary from Rhode Island. Drs. M. H. Henry and G. Sawyer were invited to be the guests of the Society.

PROF. M. C. WHITE then read a paper on

MICROSPECTROSCOPY,

exhibiting a microspectroscope of his own invention, which has a telescope of no magnifying power, the field piece and eye piece having the same power. This carries a Jackson micrometer, and is placed over the spectroscope.

EXTIRPATION OF UTERUS. RESECTION OF FEMUR.

DR. WILE related a case of extirpation of the entire uterus, performed as a forlorn hope. The patient survived five days. He also related a case of resection of the femur in a man aged forty-five, who had hip-joint disease when a boy, which was cured. He a year ago became paraplegic, and was treated for spinal myelitis for three months without relief, in New York, by the best specialists there. When he returned Dr. Wile discovered iliac abscess, and when permitted to operate found the head of the femur absorbed and a burrowing abscess reaching to the base of the scapula. After the operation the patient made a good recovery.

DR. BURKE related a successful case of complete extirpation of the uterus for cancer, and exhibited an instrument for placing the stitches high up without dragging down the broad ligament, which he considered one of the great dangers in this operation.

DR. M. H. HENRY then, by request of the Society, described the operation for varicocele which bears his name, with an exhibition and description of his clamp.

The following essays were then read: on

ORAL SURGERY

by DR. GEORGE L. PARMALE, in which he discussed the relations of diseased and imperfect teeth to digestive disorders and dyspepsia and their reflex connection with other nervous diseases besides neuralgia, which was the only one generally recognized. The improvements in general health resulting from the modern scientific treatment of the teeth were also graphically presented.

ASPIRATION IN PLEURISY

was discussed by DR. HOLMES, with interesting illustrative cases, and the advantages of the operation well presented.

DR. F. N. BRAMAN presented a very able and original essay on

COMPLICATIONS IN LABOR,

among others describing version under difficulties, in which he advocated the use of the fillet around the body of the child as giving complete control of the body, and thus rendering an essential assistance in rotation. This procedure is original with Dr. Braman, as it is not described in any of the standard authors.

DR. A. BEARDSLY then read a paper on the

TREATMENT OF MALARIAL FEVER,

in which he advocated the use of an alterative purgative, equal parts of aloes, calomel, and capsicum, boneset tea freely several times a day, and an aromatic tonic. This seems like a return to first principles, but the doctor writes from a wide experience, and claims success where quinine pushed to toleration had failed to cure.

PUBLICATION OF EARLY RECORDS OF THE SOCIETY.

After some routine business, including the reference of the voluntary papers to the Publishing Committee, and the report of the Committee to appoint Essayists, the state of the early records of the Society was discussed. DR. G. W. RUSSELL moved that the Transactions from the organization of the Society for twenty-five years be condensed and published by the Secretary, and offered to be responsible for one hundred dollars towards the expense. The offer was accepted and the motion passed.

It was voted also, on motion of DR. PORTER, that the Secretary correspond with the various County Societies to see if they would authorize the publication

of the Transactions and important papers down to the year 1830, not provided for by the preceding resolution. The Society then adjourned for the annual dinner at the United States Hotel.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

C. B. NANCREDE, M. D., RECORDER.

THURSDAY EVENING, MAY 24, 1883. The President, DR. TYSON, in the chair.

CARCINOMA OF THE STOMACH AND COLON WITH CARDIAC LESIONS.

Exhibited by DR. J. T. ESKRIDGE.

P. L., aged sixty years, Irishman, by occupation a dyer, was said to have enjoyed fair health until two years ago, when he suffered from a severe attack of inflammatory rheumatism. He knew but little of his family history, and could not give the cause of his parents' death. He never complained of heart disease. During the latter part of the year 1881, about eighteen months before his death, he first began to complain of pain in the epigastric region, attended by eructations of a sour, slimy liquid. Soon he experienced a sense of nausea, coming on an hour or more after eating. About three months after the first appearance of symptoms of gastric disease he began to vomit. At first vomiting occurred ocasionally, but soon it took place several times a week, and finally once or twice each day. He lost flesh rapidly. In the early part of March, 1883, he was admitted into the wards of the St. Mary's Hospital, when he came under my observation for the first time. He was very weak and greatly emaciated. His pulse, of the Corrigan type, was 80 per minute. When resting in the recumbent posture his breathing was quiet. Temperature was usually one degree below normal. The radial and temporal arteries were rather hard, and the latter were tortuous. A diastolic murmur and a systolic murmur were heard at the aortic orifice. The impulse of the heart was not very strong, and the left ventricle did not appear to be greatly enlarged. The lungs were emphysematous, and an area of impaired resonance, amounting to almost dullness, was discovered on each side of the spinal column, opposite the spines of the scapulæ. An indurated mass, apparently about the size of a walnut, more or less movable, was felt in the epigastric region, to the right of the median line, and about midway between the ribs and the umbilicus. The growth was not sensitive to rather rough manipulation, and he had not experienced any pain for a number of months. His bowels were sluggish, and it required active agents to evacuate them. No tumor besides the one connected with the stomach was felt or suspected in any other portion of the abdomen. He vomited almost daily. The liver and spleen were not enlarged. The urine was free from albumen.

By securing daily evacuations from the bowels, and giving him nutritious, easily assimilated food, the vomiting nearly ceased. He improved, and left the hospital the latter part of March. Early in April he was admitted to the Jefferson Medical College Hospital, where he came under my care the 1st of May. At that time he was eating but little, the abdomen was considerably distended by gas, and his bowels required repeated large enemata or enormous doses of purgatives to secure their action. On the 4th of the present month he experienced great pain in the right iliac region, and just to the right of the median line of the abdomen, midway between the pubes and umbilicus. Over and around the latter painful spot a circumscribed, highly tympanitic, and sensitive area, about the size of a man's double fist, was observed. Circumscribed peritonitis was diagnosed. Large doses of morphia, administered hypodermically, were required to relieve pain. The stomach became irritable, and the peritonitis more general. He died during the afternoon of the 8th of May.

Sectio cadaveris four hours after death by the pathologist of the hospital, Dr. Morris Longstreth.

Thorax. About seven ounces of perfectly clear serum was found in the pericardium. No evidence of pericarditis existed. Left side of heart firmly contracted; right side relaxed, and contained considerable fluid blood. Right side of heart and its valves normal. No lesion found at mitral orifice. Free borders of the leaflets of the aortic valve are thickened and slightly contracted, allowing regurgitation to take place in the aortic orifice. Aorta atheromatous, dilated, and decidedly roughened near the aortic orifice. Left ventricle slightly hypertrophied.

Lungs deeply pigmented, and generally emphysematous; both congested posteriorly. Surfaces of both apices covered with patches of fibroid thickening. Abundant evidence of diffuse peri-bronchitis chronica was present. Bronchial tubes of the lower lobes of both lungs much dilated. Bronchial glands at the root of the lungs very much enlarged.

Abdomen. On opening the abdominal cavity considerable very offensive gas escaped from the upper part. On the right of the median line of the abdomen, from the umbilicus downward, the abdominal wall anteriorly was adherent to omentum and intestine over an area of about five inches in diameter. Lower third of abdominal cavity was filled with a yellowish-white, cloudy liquid. Intestines bound together by numerous adhesions.

The stomach, which I show you, is small, and its coats are thickened. The hypertrophy of the wall of the stomach is slight at the cardiac end, but, gradually increasing, becomes considerable at pyloric. The wall of the pylorus and adjacent portions of the stomach and small bowel is about one half inch thick. At this point the mucous surface presents several fungous-looking outgrowths. The small bowel, with the exception of about half an inch of the upper portion of the duodenum, appears normal. In the colon, about six inches from the ileo-cæcal valve, is a stenosis, barely admitting the end of my little finger. The wall of the colon at the point of narrowing, which extends three or four inches of the length of the bowel, is greatly hypertrophied, measuring about one third of an inch in thickness. The colon, from its beginning to point of constriction, is dilated into a large pouch, measuring four and a half inches in diameter. The dilated portion of the bowel presented a dark, gangrenous appearance, distended by gas, was adherent to the anterior wall of the abdomen, just to the right of the median line. The remaining portion of the large bowel appeared to be healthy. No enlargement of the mesenteric glands was observed. Liver, spleen, and pancreas were small and firm, but free from malignant growths. Both kidneys were reduced in size, contained a few small cysts, their cortical substance was

lessened, and their capsules were abnormally adherent in places.

Remarks. It is worthy of remark that although considerable thickening and induration existed at the pyloric end of the stomach the orifice remained sufficiently patulous to allow the food to come in contact with the intestinal juices. Another point of interest is seen in the existence of so great amount of narrowing in the calibre of the large bowel with no symptoms, except easily obviated constipation, until a short time before the man's death. It seems to me remarkable that a bowel so dilated above the point of a narrow constriction should be able to respond painlessly to purgatives.

MITRAL STENOSIS AND REGURGITATION FORMED BY TRICUSPID REGURGITATION AND GENERAL DROPSY.

By J. T. ESKRIDGE, M. D.

Ellen D., forty-eight years old, single, servant, was born in Ireland. Her mother died from some chest trouble when about forty years of age. Her mother's relatives were subject to "pleurisies and rheumatism." Her father lived to an advanced age. Ellen enjoyed good health until six years ago, when she suffered from three attacks of rheumatism within a few months. During each attack she was lame in her feet and legs. After those rheumatic seizures she was comparatively comfortable until the early part of the year 1879, when she noticed that going up and down stairs, or prolonged or active exercise, exhausted her more than usually, and gave rise to palpitation of the heart. In the year 1880 she had another slight attack of rheumatism. She said her feet were almost constantly swollen during the years 1881 and 1882. Last summer her general health improved, but when the cold weather of the following fall and winter set in increasing dropsy and dyspnœa returned. She was admitted into the wards of the St. Mary's Hospital December 5, 1882, suffering greatly from general cardiac dropsy and associate symptoms. One month later it was noted that she temporarily improved after her admission, but the dropsy reoccurred, and she failed rapidly.

January 10, 1883, her condition was observed to be as follows: She was jaundiced, irritable, and morose. She dozed frequently. Her mind seemed clouded, but she was very restless. The tongue was heavily coated; breath had an offensive, urinous odor, stomach was irritable, and anorexia almost complete. The urine was diminished in quantity, and contained abundance of albumen. Effusion existed in each pleural cavity, slight in the right, but the left side was filled up to the lower angle of the scapula. The pericardium contained an increased quantity of liquid. The lungs were congested, and numerous moist bronchial râles were present. Arterial pulsation was seen only in the carotids. Visible venous pulsations were very pronounced in the veins of the neck, and in one or two superficial veins on the anterior surface of the chest. After emptying the veins and exerting pressure upon them they were observed to fill from the cardiac side and again pulsate while the finger was still firmly held against the vessels. A wavy impulse, extending over a large area, was seen. The cardiac pulsation was most marked just below the lower end of the sternum.

The pulse was very irregular and difficult to count, being about 120 per minute. It was intermittent, and irregular in volume and frequency. The variations of the pulse were most prominent when the hands were raised above the head. The impulse of the heart was felt over a large portion of the anterior surface of the chest. The area of the cardiac pulsation was bounded on the left by a point in the fourth intercostal space external to the left nipple, on the right by a point one inch internal to the right nipple, below by a point two inches below the sternal notch, and above by the left second intercostal space. Hepatic venous pulsation was very distinct. Percussion dullness was increased most on the right side. The pulmonary and aortic valves were apparently free from disease. A presystolic murmur with its seat of intensity over the left fourth costo-sternal articulation was heard. A systolic murmur, whose seat of intensity was over the left fifth costal cartilage, was heard over the anterior surface of the chest from nipple to nipple, and in the left axilla. It was difficult to determine whether the murmur was audible posteriorly, as the bronchial and crepitant râles and rapid breathing were confusing. Four or five days later the presystolic murmur ceased to be audible. At that time general anasarca was well pronounced.

January 24th she went into a semi-conscious condition, which gradually deepened into coma. She died January 26th. She expectorated considerable blood and frothy mucus during the last month of her illness.

Sectio cadaveris twenty-four hours after death. Body well frozen. Considerable adipose tissue still remained. Thoracic and abdominal cavities only examined.

Thorax. Left pleural cavity almost completely filled with a thin straw-colored, serous fluid. Right pleural sac nearly half full of a similar effusion. No pleural adhesions. The left lung was crowded into a small space and congested, the lower lobe sank in water. The right lung was being encroached upon by the effusion, and its lower lobe was consolidated; the upper emphysematous.

The pericardium contained about six ounces of fluid similar to that found in the pleural cavities. No adhesions or patches of fibrinous exudations were seen on the surface of the heart. The cavities of the heart were relaxed and filled with dark fluid blood. The right auricle greatly dilated. The tricuspid orifice admitted the ends of the thumb and all the fingers of one hand up to the distal joint. The right ventricle was dilated and its wall thickened. The tricuspid valve insufficient. The valves at the pulmonary and aortic orifices were thin but competent. These orifices were not constricted. The wall of the left ventricle seemed to be thickened, and the ventricle was slightly dilated. The left auricle was greatly dilated. The curtains of the mitral valve were adherent to each other near their attached borders, and constricted the orifice, which they were no longer able to close, into a round opening only large enough to admit the end of the index finger.

Abdominal Cavity. The blood-vessels of the stomach and bowels distended. The mucous membrane softened. Liver, heavy, dark, and grated under the knife. Spleen enlarged, congested, and denser than normal. Pancreas healthy. Both kidneys were congested, slightly cirrhotic, but contained considerable functionating tissue.

General dropsy is rare in cases of mitral stenosis, except as in the present instance, where it is combined with mitral insufficiency. No thrill was present during my attendance, which extended over a period of four weeks immediately preceding her death. The mitral presystolic murmur ceased to be audible during

the last two weeks of her life. The absence of the presystolic murmur in cases of extreme stenosis of the mitral orifice, late in the disease, when the heart is weak and is acting rapidly and irregularly, has led some observers to believe that the murmur is frequently absent throughout the course of this form of valvular lesion. To this point I directed special attention in a recent paper on the Diagnosis, Prognosis, and Treatment of Mitral Stenosis, read at the last meeting of the Pennsylvania State Medical Society.

CONGENITAL MALFORMATION OF THE HEART WITH CYANOSIS; DEATH AT THE AGE OF TWENTY-NINE YEARS FROM PULMONARY TUBERCULOSIS.

Dr. J. T. Eskridge gave a detailed account of the above case. The patient, a man, twenty-nine years old, had never been strong and able to run and play like other boys without suffering from severe palpitation of the heart. So far as the man could remember he did not become blue before his twelfth year. After the occurrence of cyanosis his health became much worse. He had rarely experienced pain in the region of the heart. One year ago he first observed pains shooting through the upper portion of the right side of the chest. These continued and at times were severe, being sharp and lancinating in character. From the first appearance of the pains he began to lose flesh and strength. About the time of the beginning of the chest pains, a dry, hacking cough commenced, but expectoration was not profuse until a few weeks before he was first seen, when he took a heavy cold, which was followed by high fever, great prostration, and profuse night-sweats. He was admitted to the St. Mary's Hospital January 2, 1883. The surface of his body presented a dusky hue, and his face, neck, hands, and feet (especially the fingers and toes) were quite blue. When he sat up the blue color of the mucous surfaces of the lips deepened into dark purple. The distal phalanges of the fingers and toes were hypertrophied, and the small superficial veins of the face, fingers, and various other portions of the body, were easily seen and counted. The upper lobe of the right lung was consolidated and contained a cavity; the lower lobes were partially infiltrated. In the left lung the lower lobe was solid, and the upper was being infiltrated. Over the left lung pleuritic friction râles were numerous.

No venous pulsation was discovered. A presystolic thrill was felt in the third and fourth intercostal spaces to the left of the sternum, and was barely appreciable in the third intercostal space at the right border of the sternum. Percussion dullness was increased laterally. The cardiac impulse was felt and seen in the fourth intercostal space external to the left nipple.

A systolic and a presystolic murmur, with their seats of intensity near the left fourth costo-sternal articulation, were heard. The systolic murmur was audible anteriorly over a large area, and posteriorly at the lower angle of the left scapula. Anteriorly the systolic murmur was heard as low as the seventh rib on each side the sternum, faintly just below the left clavicle, but it was lost just below the right clavicle. The systolic murmur was audible in the left axillary region, but not in the right. The presystolic murmur was limited to a small area. The next three days the temperature varied from 100° to 102.5° F. On the 6th he coughed up several mouthfuls of blood unmixed with mucus. From the 7th to 11th was profuse expectoration of purulent matter containing small quantities of blood. Breath was very offensive, and the apex of the right lung was breaking down rapidly. Diarrhœa was rebellious and exhausting. He died suddenly on the morning of the 12th.

Post-mortem examination was made about four hours after death. The lungs were infiltrated by tubercle. The left pleural cavity had been obliterated by general pleuritic adhesions, the right contained about three pints of sero-sanguinolent fluid.

Heart. Numerous pleuro-pericardial adhesions were present. The pericardium was not inflamed on its internal surface, and was nowhere adherent to the heart, but it contained about two ounces of a straw-colored serous fluid. The heart was anæmic, flabby, and dilated. Its cavities contained a small quantity of fluid blood. No heart clot had formed. The right auricle, including its appendix, was enormously dilated. The right auricular wall was somewhat thickened. Across this auricle a thin membranous strip stretches from right to left and from above downward. Its attachment above was at the upper portion of the auricle to the right of the appendix, below at the left margin of the tricuspid orifice. The imperfect septum, he thought, had been an attempt by nature to divide the auricle into two nearly equal compartments. The interauricular septum was imperfect, the foramen ovale being sufficiently patulous to admit the passage of his thumb from the right auricle into the left. The right auriculo-ventricular orifice was enlarged and admitted the ends of the thumb and all the fingers of one hand. The right ventricle was dilated to nearly twice its normal size. Its wall was not much thickened. A patch of fibroid induration, one inch long by half an inch wide, was seen on its endocardial surface. The anterior and posterior segments of the tricuspid valve were united and formed one large leaflet. The left segment was so situated that it could not have aided materially in closing the auriculo-ventricular orifice. The greater portion of the imperfect segment was stretched across the ventricle near the apex of the heart, and more or less obstructed the current of blood from the ventricle into the pulmonary artery. Free regurgitation at the tricuspid orifice was permitted on account of the large size of the orifice and the imperfect condition of the valve. The other valves of the heart were thin but competent. None of the orifices of the heart were constricted. The left cavities of the heart were rather small. The pulmonary artery was smaller than normal. No special disease besides a fatty condition of the liver was seen in the abdominal organs.

In his remarks on the case Dr. Eskridge said that the membranous strip which extended across the right auricle vibrated with the auricular current of blood, and, probably, had given rise to a presystolic murmur. If the blood in struggling through the patulous foramen ovale had given rise to a murmur, it also would have been presystolic in time. He stated that the presystolic murmur in the case was well defined and easily distinguished from the systolic one, and thought it was unfortunate for the science of physical diagnosis that both these conditions existed in the same heart. He knew no means by which one would be able to attribute the presystolic murmur to one or both of them, since it was not positive whether an interauricular current was capable of developing a presystolic murmur. He desired that the heart should be referred

to a committee of three for a fuller report on the congenital malformation.

DR. NANCREDE referred to the development of the heart as explaining such variations, etc. It was referred to a special committee for examination.

(To be continued.)

THE AMERICAN SURGICAL ASSOCIATION.

THE American Surgical Association held its fourth annual meeting in Cincinnati May 31st and June 1st and 2d, inclusive.

MEMBERSHIP.

The full membership of the Association is limited by its Constitution to one hundred; last year it had eighty-nine Fellows, nearly all of whom were present at this meeting, at which eleven more were elected, making the full complement for the first time in its history. At the suggestion of the President, PROFESSOR GROSS, in his opening address, an amendment was submitted, to be acted upon at the next meeting, increasing the number of resident Fellows to one hundred and fifty. The Association, under the able leadership of Professor Gross, has been very vigorous and progressive, and shows evidences of vitality such as warrant the opinion that it is now firmly and permanently established; the President accordingly notified the Association that he could not be a candidate for re-nomination; he would not consent to monopolize the honors, but advocated the principle of rotation in office.

FIRST DAY.

After the usual business at the opening of the meeting, the address by the President, the report of the Committee on Entertainment, reading of the minutes of the last meeting, etc., the scientific papers were introduced by DR. CHARLES B. NANCREDE, of Philadelphia, who read a short communication detailing a series of experiments made to determine

THE EFFECTS OF LOCAL BLOOD-LETTING UPON THE PROCESS OF INFLAMMATION.

He concludes that in blood-letting, local and general, we have an agent capable of arresting or favorably modifying inflammatory processes, provided it be undertaken early. The object in view in pursuing this investigation was to ascertain more precisely the indications for blood-letting, and its limitations. In the discussion which followed, which was quite general, the paper was highly praised, and the therapeutic value of blood-letting, local and general, in appropriate cases commended.

DR. B. A. WATSON, of Jersey City, read a paper on

THE VALUE OF THE ASEPTIC TREATMENT OF WOUNDS, AND THE SO-CALLED MODIFICATIONS OF THE LISTER METHOD,

in which the principles taught by Lister — the antiseptic cleansing and complete drainage of wounds, the perfect coaptation of the divided parts, and rest — were insisted upon as essentials in modern surgery. Although some surgeons still condemn the method, it is mainly because they have not tried it, or, like Keith, they reject it in part, but he stated that not a surgical operation in any of our large cities is performed to-day that has not been influenced in some way by Lister's teachings. He denied that carbolic acid is Listerism, and stated that these principles can be carried out without its aid. In conclusion he referred to Professor Markoe's modification of Lister's system in his paper, published three years ago, on Thorough Drainage of Wounds, and showed that it violated the fundamental principle of rest for the inflamed part and infrequent dressing of recent wounds, and his experience had shown it to be less efficient than Lister's method in full.

The discussion upon this communication was quite active, Listerism being the veritable apple of discord to this Association, and one which reappears perennially, but is never settled; it probably never will be by discussion.

At the afternoon session the President appointed a Nominating Committee, and the Council submitted the names of eleven candidates for Fellowship, to be balloted for on the following morning.

DR. PACKARD read an interesting report of a case of

HIP-JOINT AMPUTATION (SECONDARY) BY THE FURNEAUX JORDAN METHOD,

in which preliminary ligature of the femoral in Scarpa's triangle was performed to prevent hæmorrhage, but on the sixth day bleeding occurred, and a ligature was applied upon the common iliac artery. The ligature came away on the twentieth day, and the patient is now ready to be discharged, the wound having healed except a small sinus. He referred to a similar operation performed by him during the war (the details are contained in the Medical and Surgical Annals of the War), and stated that if again called upon to perform hip-joint amputation he would apply a preliminary ligature around the trunk of the common iliac. In conclusion he presented a table containing an analysis of sixty-two cases of ligaturing of the common iliac, and pointed out some mistakes made in some of the modern text-books with regard to these statistics. He also exhibited a curved aneurism needle, suitable to hold in the forceps, for throwing a ligature around this vessel without exposing it to view.

DR. FIFIELD, of Boston, in discussing this communication, could not see the need of performing preliminary ligation of the main trunk, when performing amputation according to the Furneaux Jordan method; he had understood that the method was devised expressly to obviate preliminary operation. He approved of the remarks with regard to the tying of arteries without exposing them to view, and stated that he had been taught many years ago to look up to heaven when tying an artery.

DR. POST, of New York, thought that the eyes are often needed to distinguish the artery from the vein.

DR. PACKARD thought that it was a good thing for surgeons to look up to heaven, as a general rule, but it is not always safe to continue doing so while tying arteries, especially the sub-clavian and axillary, where the ligature might be thrown around the brachial plexus by mistake. With regard to the common iliac, however, he did not think such complete exposure necessary, as the relations can be traced with the finger. The preliminary ligation had been made in this case on account of the low condition of the patient and the danger of secondary hæmorrhage.

Dr. J. G. Richardson, of New Orleans, reported a case of

ANOMALOUS ANEURISMAL TUMOR

in the thigh. The case was that of a man, born in 1834, who in 1876 received a gun-shot wound in the thigh, in the line of the femoral artery, the ball passing out through the popliteal space. No serious hæmorrhage, pain, or great inconvenience followed the accident, but the wound healed rapidly, and he was not rendered lame by it. Eighteen months afterwards a tumor appeared at the place of injury which was found to contain blood when he came under a physician's care a year later. Believing it to be a traumatic aneurism ligation of the femoral was performed, subsequently gangrene occurred, and an amputation of the thigh was made, but the patient succumbed from exhaustion. The aneurismal dilatation was found on dissection to involve an anomalous branch of the femoral artery; it had been probably arterio-venous in character originally. The specimen was presented and referred to a special committee of Drs. Nancrede, Kinloch, and Dawson, to report the next morning.

Dr. Richardson also read a paper on

THE TREATMENT OF EMPYEMA BY RESECTION OF RIBS.

After reporting several successful cases in which marked benefit was experienced from this procedure, he proceeded to discuss its details, and especially recommended the division of one or more of the ribs by the trephine. The operation was considered to be more serviceable in cases of chronic purulent collections following traumatism with sinuses already existing, rather than those resulting from pleuritis of a suppurative character.

Session adjourned.

(*To be continued.*)

Recent Literature.

Lectures on Orthopædic Surgery and Diseases of the Joints. By L. A. Sayre, M. D. Second edition. D. Appleton & Co. 1883.

When Dr. Sayre's lectures were first published they met with a cordial reception due to the teachings of an eminent man who had interested himself actively in the subject of orthopædic surgery. Many of the imperfections of the work were overlooked as the author was entitled to some indulgence, busied as he was in the engagements of an active professional life. It would, however, be stretching the mantle of charity to attempt to cover within its folds "a revised and greatly enlarged" second edition. To be plain, the book seems to be one of that class which is written more to attract attention than to give accurate information. Too much space is devoted to the relation of personal exploits, and too little to a careful statement of the advantages of certain methods of treatment. The chapter on harelip may be taken as an illustration of this. Two pages and a half are devoted to this important subject, but of these two are filled with the relation of a single case, giving the names of the distinguished men who had the opportunity of assisting at the operation, and many details of minor importance including two quarter page illustrations of the "before and after" order. Certainly the young surgeon who needs information to aid him in his first operation will be obliged to have recourse to another book. The same faulty method disfigures the whole work, even the parts devoted to phimosis, excision of the hip, and caries of the spine, subjects about which much that is of value is to be expected from Dr. Sayre. An attempt to distill the essential oil of wisdom from the mass of professional garrulousness and letters of indorsement published in the lectures would reduce the volume to a few pages. It might be added that those few pages would be of value, as few medical writers possess the power of graphic description to a greater degree than Dr. Sayre.

The medical world owes the New York surgeon a debt of gratitude for the general interest he has awakened in the treatment of deformities and the diseases of the joints. He found orthopædic surgery a chamber of antiquated mechanical horrors, and he sees now a new and active school of surgeons, who work with the hope of still greater improvement in methods.

The present edition of the lectures cannot, however, be said to be equal to the spirit of the times or likely to enhance its writer's reputation. A protest must be uttered against the extreme carelessness in the drawing of many of the illustrations; the cuts which made the first edition unique reappear with companions of even greater imperfection, indicating carelessness or faulty powers of observation. It is to be hoped that the cut on page 324 is the worst that ever will be offered to an indulgent medical public. To the colored lithograph illustrating "reproduction of hip-joint after exsection" must be accorded the merit of beauty of execution. It would appear, however, to depict a joint but partially "reproduced," and in a state of active osteomyelitis.

If a comparison may be allowed, the work suggests a medical counterpart to the State papers of his excellency the present governor of Massachusetts. There is the same assurance, the same lurking humor, the same delight in the unexpected, and, if the truth be said, the same "appeal to the galleries."

A Text-Book of the Diseases of the Ear and Adjacent Organs. By Dr. Adam Politzer, Professor of Aural Therapeutics in the University of Vienna, etc. Translated and edited by James Patterson Cassells, M. D., M. R. C. S. Eng., Lecturer on Aural Surgery at the Glasgow Hospital, etc. With 257 original illustrations. 8vo. 800 pages. Henry C. Lea's Son & Co. 1883.

This translation of the extended and very thorough work of Professor Politzer is published within a very short time of the appearance of the last volume of the original, the first half of the German edition having been issued some two years ago, but the last half only appearing in November of last year. The translation, however, bears no signs of haste in its preparation, and is complete and satisfactory in an unusual degree.

The work itself we do not hesitate to pronounce the best upon the subject of aural diseases which has ever appeared, systematic, thorough without being too diffuse on obsolete subjects, and eminently practical in every sense.

The first thing which attracts attention is the arrangement of subjects. Instead of beginning with the natural anatomical divisions of the ear, and passing

from the auricle to the meatus, thence to the tympanum and labyrinth, we have the anatomy of the sound-conducting apparatus as a whole first described, then its physiology, and then its diseases. The diseases of the different portions of the middle ear, membrana tympani, and tympanum, are then described, followed by diseases of the naso-pharynx, adhesive affections of the middle ear, purulent inflammation of the middle ear, and diseases of the mastoid process. The succeeding chapters are: Diseases of the External Ear, Ear Disease and Life Assurance, Anatomy of the Internal Ear, Physiology of the Internal Ear, Diseases of the Internal Ear, Injuries of the Internal Ear, Cerebral Disturbances of Hearing, Malformations of the Ear, Deaf-Mutism, Hearing Instruments for the Deaf, Appendix of Therapeutical Formulæ, and Index.

The anatomical descriptions are admirable, and profusely illustrated by wood-cuts, many of them from original and very instructive sections. Especially worthy of mention are the illustrations showing the relations of the mastoid to the middle cranial fossa, sigmoid fossa, etc. The anatomical descriptions of each separate division of the ear are followed immediately by the physiology of that section, and this again by the pathological physiology, an arrangement which serves to keep up the interest of the student by showing the direct application of what has preceded to the study of disease.

The subject of otoscopy, or the appearances of the membrana tympani in health and disease, is most satisfactorily treated, as we should expect from the author of the largest and best monograph on the subject, and in this respect the book is a very great improvement upon any of its predecessors, this subject being generally passed over hurriedly and superficially, when in fact it is the most difficult of aural surgery.

The best parts of the book, and the parts showing the most original and extended study, are the minute descriptions of the pathological histology of the middle ear, which are fully illustrated.

In the chapter on Diseases of the Tympanum attention is called to the confusion of names used for diseases of this cavity, and a somewhat different nomenclature from that in common use is proposed by the author, and used by him. He says that for practical purposes it would be advisable to call those pathological processes which run their course without significant inflammatory phenomena, and with a discharge of sero-mucous exudation, "catarrhs;" and those processes which are accompanied by more or less violent inflammatory phenomena, and by the formation of muco-purulent or simply purulent secretion, "inflammations." By this arrangement we have (1) acute inflammation of the middle ear, which includes the common acute catarrhal and serous inflammations, the most frequent and best examples of which are seen in children; (2) catarrh of the middle ear, commonly known as chronic catarrhal inflammation, and including accumulations of mucus and serum, a swollen and moist mucous membrane and closed Eustachian tube; (3) adhesive processes in the tympanum, including what have been variously called otitis media catarrhalis chronica, otitis media sclerotica, otitis media hyperplastica, and proliferous inflammation; (4) acute purulent inflammation of the middle ear; (5) chronic purulent inflammation of the middle ear.

Under the fifth division especial attention is called to the hypertrophic processes which are so apt to occur with this disease, and which have been but slightly touched upon by other writers. The innumerable appearances, conditions, and complications of this disease are exceedingly well described.

The anatomy of the mastoid is given thoroughly, and the more recent observations on the great variability in the number, size, and thickness of the pneumatic cells fully recognized. A new method of treatment, spoken of as very effectual, is Leiter's cooling apparatus, consisting of a coil of leading pipes through which cold water is continuously passed, thus retaining an equable degree of cold.

The remaining parts of the book are all equally satisfactory with those which have been noticed, and the whole work can be recommended as a reliable guide to the student, and an efficient aid to the practitioner in his treatment. But while we can speak so favorably of the text of the work, a considerable reservation must be made in speaking of the illustrations; the original, in the German edition are wood-cuts beautifully drawn and of unusual execution, while those of the American edition are indistinct and very dark, so that, although they answer their purpose fairly well as illustrations, they lack any artistic merit.

Practical Lessons in Elementary Physiology and Physiological Anatomy. By D. M'ALPINE. London. 1883.

In an oblong quarto of great area, as it lies open upon the table, M'Alpine has published twelve coarsely but accurately drawn plates of a partially diagrammatic character. The illustrations picture for the most part the anatomy of the rabbit. The first plate represents the general anatomy of a child. By way of physiology we find sixteen test tubes, most of which are shaded alike, but each is named differently, they being intended to illustrate the processes of digestion. The book is intended for use in schools, and when used by a competent teacher in conjunction with actual demonstrations we think it would prove a useful adjunct. The author has meant it to be thus used, and in the explanation of the plates has incorporated much information that would help the children to remember the real appearance of the organs and parts shown them. We think, however, that better illustrations would be valuable. The figure of a frozen section of a rabbit would be improved if colored, for at present it is bewildering to look at; indeed it ought to be replaced by a new drawing of a specimen less distorted. We were pleased to find the book very much better than its somewhat unattractive appearance led us to anticipate.

— The *Medical and Surgical Reporter* revives the following story of the two brothers Channing, who at the same time adorned the medical and clerical professions respectively in this city: "The reverend doctor and the medical doctor were both at a party in Boston one evening, and some one being taken ill the man of medicines, Dr. Walter Channing, was summoned. The servant entered the room where the brothers were seated, and said, 'Dr. Channing is wanted.' 'Which Dr. Channing?' said Walter, the physician, 'the one who preaches, or the one who practices?'"

Medical and Surgical Journal.

THURSDAY, JUNE 7, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

THE DECLINE IN THE DEATH-RATE AND INCREASED DURATION OF LIFE IN ENGLAND.

SINCE the publication of the first English registration report of vital statistics, under the direction of Dr. William Farr, in 1837, the number of years making the life-time of a generation has been completed, and that of a second generation begun, and with the appearance of each year's registration report it becomes more and more possible to reach a correct and intelligent interpretation of these figures as showing what has been accomplished during those years toward prolonging the life and increasing the efficiency of the average inhabitant of England. A scientific system of vital statistics was the necessary precursor and immediate generator of a scientifically progressive system of State or preventive medicine. Vital registration and the vital statistician suggested and made possible the Public Health Acts and the Medical Officers of Health.

It is certainly as important to interpret vital statistics correctly as it is to possess them, and the interpretation of the English statistics, especially with regard to the prolongation of life, has given rise to considerable discussion and some curious errors. It is generally acknowledged that the Registrar-General's mortality statistics prove that a marked decline has occurred in the national death-rate in recent years, although until the year 1871 the death-rate remained about stationary. Up to that time those opposed to sanitary legislation and expenditure cited the fact of a stationary death-rate to show their inexpediency, omitting to emphasize the other fact that the rate remained stationary in spite of the rapid increase of urban aggregation. It was also propounded that "an increase in the rate of mortality is often a sign of prosperity, for a high death-rate means a high birth-rate, and a high birth-rate is the invariable concomitant of prosperity."

But since 1871 it has been necessary to acknowledge the gradual though considerable decrease in the death-rate, and the same class of opponents of sanitation have endeavored to disarm the fact of its force by the explanation that it was the dependent and not the active years of life which were increased, an explanation gaining plausibility from the report for 1879, published in June, 1881, where attention was called to the marked decline in the death-rate in childhood and the coincidently increased death-rate among adults.

An editorial in the *Spectator* shortly after the appearance of this report, under the heading Improvement in Human Health, asked with reference to the decline in the death-rate, "What is the kind of life which is increasing, is it young life, or mature life, or aged life which is being enlarged; or, in fuller words, do we gain from all our costly and troublesome hygienic devices a longer period during which we retain the full energy of youth, or a longer duration of the period of wisdom, — such as wisdom is, — or a greater stretch of old age? Do we live longer in fact, or are we only a little slower in dying?" This writer evidently thought that the prolongation of human life had accrued to the benefit of the first and last, or the dependent portions of the seven stages of man, — "to the infants muling and puking in the nurse's arms and to the lean and slippered pantaloons," — and that society as a whole derived but a questionable benefit therefrom.

The same query has been put and answered in various ways on various occasions, but we have seen nothing on the subject so satisfactory and deserving of attention as a paper read before the Statistical Society of London in April last.[1]

Before the establishment of civil registration in 1837 very little, of course, was known of the variations in the annual death-rate. The Registrar-General's mortality statistics cover the forty-five years 1838–1882. Although varying from year to year the death-rate remained, as has been said, practically stationary during the thirty-three years 1838–1870, the extreme range being from 24.7 and 25.1 in 1847 and 1849, years of epidemics, to 20.5 in 1856. The mean death-rates of the census-decades, however, were, as Mr. Humphreys shows, remarkably uniform, averaging 22.3 in the three years 1838–1840, 22.4 in the ten years 1841–1850, 22.2 in the ten years 1851–1860, and 22.5 in the ten years 1861–1870. In 1872 the first Public Health Act became law, and the second in 1875: the mean death-rate in the five years 1871–1875 fell to 22, and in the following five years (1876–1880) it again fell to 20.8. In the two following years, 1881 and 1882, still lower rates, 18.9 and 19.6 respectively, were recorded, implying that more than 150,000 persons survived those two years whose deaths would have been recorded had the mean rate prior to 1871 prevailed.

For purposes of analysis and comparison with this earlier period Mr. Humphreys takes the period of five years, 1876–1880, although giving tables by which the changes in the death-rates of males and females at twelve groups of ages during the eight quinquenniads of 1841–1880 may be traced. In order not only to be able to consider these changes, but to estimate their effect upon the expectation and duration of life in England, he constructed a new life table for these five years, thus making them comparable with the seventeen years, 1838–1854, which served as the basis for a life table constructed by Dr. Farr — years representative of the earlier death-rate.

[1] The Recent Decline in the English Death-Rate and its Effect upon the Duration of Life. By Noel A. Humphreys, Esq.

In analyzing the decline shown by the comparison of death-rates during the two sets of years Mr. Humphreys considers it with reference to the death-rate of males and females, and secondly with reference to its incidence at various groups of ages. The decline in the death-rate of males is equal to 4.7 per cent., and in that of females to 9.7, a relative advantage in favor of females which may fairly be attributed not alone to a greater benefit from improved hygienic household conditions, by which women profit more than men, but also to a more successful management of the lying-in bed. Following the registrar-general's mortality statistics twelve groups of ages are taken, these groups being quinquennial up to twenty-five, and afterwards decennial up to the twelfth group, including those aged eighty-five and upwards, and the net result of the analytical comparison of the rates for males and females during these age-groups shows that the death-rate of males in 1876–1880 exhibits a decline at each age-period except the four decennial groups between thirty-five and seventy-five. The death-rate of females showed a decline at each of the age-periods except the two between fifty-five and seventy-five. The somewhat increased death-rate for men between the ages of thirty-five and seventy-five may probably be attributed to the constantly increasing severity of the struggle for existence in a very thickly settled country with a very large urban population, a state of things for which emigration provides an excellent remedy for men under thirty-five years of age.

In regard to the mean duration of life or mean expectation of life at various ages a comparison of Dr. Farr's and Mr. Humphreys' new life tables shows that the mean duration of life of males has increased from 39.91 years to 41.92; of females from 41.85 years to 45.25 years, or of a generation from 40.86 years to 43.56, showing an increase of 2.70 years, equal to nearly seven per cent.

This increased expectation decreases steadily at each age-period with the decrease of the proportional decline in the death-rate. Calculations as to the relative profit derived from this increased expectation of life by the dependent or independent periods are condensed by Mr. Humphreys in the following sentences: —

"Although a large proportion of young people cease to be dependent before twenty, and a large proportion of elderly persons do not become dependent at sixty, we shall not be far wrong in classing the forty years from twenty to sixty as the useful period of man's life. Table IX. shows us that of the 2009 years added to the lives of 1000 males by the reduction of the death-rate in 1876–1880 no less than 1407, or seventy per cent., are lived at the useful ages between twenty and sixty. Of the remainder of the increase 445, or twenty-two per cent., are lived under twenty years, and 157, or eight per cent., above sixty years. Thus of the total increase seventy per cent. is added to the useful, and thirty per cent. to what may be called the dependent-age periods. The increased number of years lived by 1000 females, according to the rates of mortality that prevailed in 1876–1880, is 3405. Of these (see Table X.) 2196, or sixty-five per cent., are lived at the useful ages between twenty and sixty; 517, or fifteen per cent., under twenty years of age; and 692, or twenty per cent., over sixty years."

Looked at from another point of view there has been an addition of three minutes for men and five minutes for women in England to every hour of their existence, and under her present conditions a country with a population of thirty millions would, at the end of a generation, have two millions more inhabitants than under England's previous conditions.

Life is not only longer, but active life is begun later, and old age is more robust. We think Mr. Humphreys' analysis of the Registration Reports will be acknowledged to amply justify sanitary legislation and expenditure.

A MODEL HOUSE.

A BOLD attempt to solve the difficult problem of house heating and ventilating is described under the above title in the last number of the *Lancet*. The house in question is the property of Dr. Hogg, of Bedford Park, Chiswick. In it no window can open, and there is no fire-place, except in the kitchen. Underneath the hall a large passage is used as a receiver of fresh air, where it can be cooled in summer by ice, while in winter it is warmed by hot steam-pipes, heated by a small coke stove. The air then passes up into the hall through an iron trellis-work and travels into every room by apertures made in the skirtings and cornices. In the ceiling of each room there are openings into exhaust shafts which lead to the foul-air chamber in the roof of the house. A large shaft runs from the foul-air chamber down to the back of the kitchen fire, where the heat of the boiler and the fire suffice to attract the air, and a square brick shaft or chimney conveys it through the roof into the open air. In the centre of this shaft is a circular metallic flue, which carries away the smoke of the kitchen fire, and this flue, always more or less heated, stimulates the current. A comparison of the minimum velocity of the air in the extracting flues with the cubic contents of the house, shows that the atmosphere is entirely changed throughout the dwelling once in every twenty minutes. This result is obtained without the slightest draught; yet ten persons smoking in one room felt no inconvenience, and next morning there was not the slightest trace or taint of tobacco odor remaining, a test which will endear the system to every housekeeper. Every part of the house being equally warm, all danger of catching cold from draughty corridors, chilly bed or bath rooms, is obviated. A nurse and three children sleep in one room measuring fourteen feet square by ten feet high. The system works so well during the night that in the morning the room is not at all "stuffy," but quite sweet and clean. Dust and dirt are reduced to a minimum, and two domestics do the work for which three were formerly required.

In coal the cost has been reduced by one third, though the whole house is warmed instead of a few rooms.

The temperature is easily modified, and remains the same throughout the whole house, an exceedingly important result for invalids and people of delicate constitution. The *Lancet* believes the results to be such that the house will find many imitators, but it justly remarks that the reform will also be opposed by the rooted habits of the country. There are few Englishmen who will not object to the abolition of fire-places, and it is awkward in an emergency to find the window hermetically closed so that it is impossible to lean out and hail the friendly policeman, or watch what is passing. Whether the two domestics find these deprivations offset by the lessened labor our honored contemporary does not state.

THE NOTIFICATION OF MEASLES.

WITHIN the past few days the Board of Health of the City of Boston has issued a circular, in which, in addition to the other diseases required to be reported, it calls upon physicians and householders for the notification of all cases of measles.

The ordinary view of the disease differs somewhat from the importance attributed to it by the Board of Health. Many cases of the disease are passed through without a physician being called. Many other cases are seen by a physician but once, and principally then for the sake of a diagnosis only. Every doctor, however, who knows the disease thoroughly has learned to respect it in view of its complications and possible sequelæ, and we all know that at times it is capable of showing unusual virulence. The present epidemic has proved an unusually severe one, being attended with a few cases of a hæmorrhagic variety, which have proved, like other hæmorrhagic exanthems, rapidly fatal. In addition, the number of fatalities has been on the increase.

We append the number of fatal cases for each week during the preceding three months: —

Deaths for the week ending

February 24th	1	April 21st	6
March 3d	0	April 28th	4
March 10th	1	May 5th	7
March 17th	4	May 12th	10
March 24th	4	May 19th	11
March 31st	2	May 24th	11
April 7th	2	June 2d	15
April 14th	6		

Such a progression seems to justify the Board in regarding measles as a disease dangerous to the public health within the meaning of the statute. The extreme contagiousness of the disease makes the precaution the more reasonable.

Boston is not alone in its epidemic. An extract from the Connecticut Sanitary Report for April illustrates that fact, as well as the ease with which the disease is spread: —

"Measles have been more generally diffused than any one form of disease, except those mentioned first, that is, diseases of the respiratory organs. There have been several cases in Goshen, Barkhamsted, Thomaston, and Salisbury, one fatal. About sixty cases are reported from New Canaan. Last winter there were some seventy cases in Seymour apparently spread from one person who attended a masked ball while sick with measles, — indeed the day after a physician was summoned. The ball was largely attended and the dancers were numerous. There were fifteen children from three to eight years of age on the stage and every one caught measles. Eleven out of twelve from an adjacent town, Oxford, who attended, also had the disease, and it was estimated that over a hundred cases were spread from that one centre of infection. There are quite a number of towns in the southern part of the State that have been affected with measles, and also some in other parts which have not been definitely reported. There have been but few fatal cases."

MEDICAL NOTES.

— The New England Aid Society for the Aged and Friendless intend to open a home for aged couples in the autumn if sufficient funds are subscribed for the purpose.

— The lately published Life of Bishop Wilberforce contains the following little anecdote, which ought to attract the attention of authors of treatises on Domestic Medicine and Before the Doctor Comes: "Mrs. Disraeli told the Queen, 'When Disraeli has a sore throat I cure him by putting my arm round his throat and keeping it round all night.'"

— The *North German Gazette* attempts to prove by statistics that the danger of contracting trichinosis from American pork is sixty times greater than it is from German pork, and refers to the latest reports of the Sanitary Officers at Chicago, Erie, and Boston, and to publications in the *New York Medical Journal*. To prove the correctness of its statements the *Gazette* declares that the inspection of pork on its arrival at German ports has proved useless. It says that the quantity of American pork consumed in Germany is small and is decreasing, and that the question, therefore, is not of economic importance.

— In view of what is sometimes said regarding the mutual antagonism in the development of brawn and brain, it is worthy of note that four out of the five men who won prizes in the Boylston prize speaking at Harvard College this spring had been prominent in athletics throughout their college course.

— In the *Lancet* of February, page 221, a letter signed "Nautilus" speaks of sailors stating that lime-juice acted as an anaphrodisiac. It is suggested by another writer in the same journal that the anaphrodisiac effect is probably due to the action of the "salts of potash, which cause the elimination of the products of the increased metamorphosis of tissue; the alkalies diminish the body-weight, impair the quality of the blood, and lower the pulse of the organism."

— Of 89 persons affected with tabes who were observed at the Charity Hospital of Berlin,[1] 17 presented mental troubles; 10 were attacked with progressive

[1] Archiv für Psychologie, 1881, B. xii.

general paralysis with aphasia or simple dementia; 4 with delusions of being persecuted; 3 were hypochondriacal. Papillary atrophy existed in 13 per cent. of the whole number of cases, but among those who were insane in 35 per cent., while of the sane it only occurred in 3 per cent. Paralysis of the oculo-motors was found in 47 per cent. of the insane, 15 per cent. of the non-insane, and 22 per cent. of the whole. It would seem then from these figures that the presence of ocular troubles in ataxia indicated in some degree the imminence of psychical disease.

— Hippophagists are on the increase in England. The butchers of Manchester are excited by the fact that large quantities of horse flesh are being offered for sale as human food in that city, and have petitioned the city council to require a proper notification of the article for sale by the dealers in such meat. There appears to be much less alarm among the consumers than among the butchers. In London the use of horse flesh is rapidly extending among the poorer classes, as it is much cheaper than beef or mutton, and is a nourishing article of food. In France it is consumed largely. Except that it is rather darker in color there is said to be hardly any difference in appearance between the flesh of a horse and that of an ox.

— In a discussion by the Obstetrical Society of Washington on the induction of premature labor, one of the speakers remarked that he had heard a professor of obstetrics in Philadelphia tell his class that he "believed the time would come when fashionable women would have their children at any time that suited their convenience during the last four weeks of pregnancy." What will the fossils who used to maintain that there was such a thing as "meddlesome midwifery" say to this?

— A correspondent of the *Lancet* (April 21st) says, apropos of the discussion at a late meeting of the American Laryngological Association on the influence of deviation of the nasal septum on the quality of the singing voice, that in all the cases that have come under his care the voice has been impaired, and considerable improvement has been the result of treatment. He refers particularly to the case of a gentleman who had suffered from obstructed respiration in the affected nostril as long as he could remember, and for the last few years had been quite unable to sing. The septum, which was strongly bent to the right side, was forcibly straightened, the septal cartilage being at the same time divided in a stellar manner by means of a tenotome to overcome its resiliency, and maintained in position by retentive apparatus. The improvement in this case was most marked. The nasal intonation was lost, and he tells his physician that he is now able to sing with pleasure, and that his friends consider that he has a very good voice.

— The Paris correspondent of the same paper relates a rather curious *procès* which lately took place before the justice of the peace at St. Germain, in which a pharmacien was prosecuted for having refused to give up a prescription that was taken to him by a patient. The patient claimed the prescription as being his property, which the chemist contested, but the tribunal decided otherwise, and the prescription was restored to the patient. The Société de Médecine Légale, commenting on the case, was of opinion that, although the decision of the judge was unassailable from a legal point of view, yet it was considered that the restitution of the prescription was attended with great inconvenience, as the patient may take it to other chemists successively, and have it made up oftener than may be necessary or good for him, without any reference to the medical man who gave him the prescription. Thus it has lately happened that a female patient spent eighteen hundred francs for the purchase of morphia for hypodermic injections, which had been only a few times prescribed for her, but which she ultimately employed on her own account. The result was that she became insane, which the medical experts who were required to give their opinion attributed to the abuse of morphia. Whereupon the husband sued the chemist, but a case of the kind not having before been brought to the notice of the court, the present prosecution has been remanded for legislation.

— One function has been added to the duties of some of the English health officers which, fortunately, has not yet fallen to the lot of our American guardians of public hygiene. Dr. Hill, the medical officer of Birmingham, recently assisted in the removal of a large quantity of dynamite, which had been discovered in a Fenian laboratory. While this officer was doubtless technically correct in considering dynamite a substance inimical to public health, and therefore demanding his personal supervision over its removal, we suspect that many another such functionary would have been glad to shift such a charge on to the secular arm. No public recognition seems to have been made of this act, which involved, perhaps, as much of heroism as many a deed that has received a decoration.

— A description of the disease known as neurasthenia in the female by Mr. Augustus Hoppin shows that artist to be not less faithful to nature in the use of his pen than in that of his pencil: "It generally attacks the handsomest and richest of the sex, and seldom leaves them until all their friends die of it, for they themselves never do. First comes a sharp, wee quirk of the head, then a horrid neuralgic tweak in the 'small' of the back, and then it 'jangles' up and down the spine with agonizing force. But it somehow eases away again when the men of the family have gotten comfortably away to the office."

— The water of the public reservoir at Trenton is said to be so polluted with dead shad and shad spawn as to be very unpleasant to drink, although the medical authorities have expressed the opinion that it is not positively unwholesome.

— During the last session of the New Jersey Legislature an act to regulate the sale of poisons was passed, which provides that it shall be unlawful for any person to sell, either at wholesale or retail, any of the drugs usually denominated poisons without distinctly labeling each and every bottle, box, or package with the name of the article, and the word "poison,"

together with the name and place of business of the seller. Under this law charges have been preferred against a number of Chinamen in Newark for selling opium without the above precautions.

— A way of turning old bottles to good account has been discovered. A man runs against you in the street and simultaneously drops a medicine bottle on the pavement; whereupon you learn that you have broken the poor fellow's bottle of medicine, and you are invited to give him a shilling to get another dose. The fellow who tried the plan in London would undoubtedly have made it work well if he had not been so foolish as to stay in the same street a whole day in full view of the same police constable.

NEW YORK.

— The fourteenth annual commencement of the Woman's Medical College of the New York Infirmary was held at the Madison Club Theatre Friday evening, June 1st, when Dr. Mary Putnam Jacobi delivered the address to the graduates, who were only five in number, and the Rev. W. S. Rainsford, of St. George's Church, made an appeal for funds for the support of the college.

— Mrs. Oswald Ottendorfer, the wife of the proprietor of the New York *Staats Zeitung*, is about to erect two buildings on Second Avenue for the German Dispensary, which for some time past has been in urgent need of increased accommodations. One of these will be for the dispensary proper, in connection with which there will be a working laboratory, and the other for a library, with free German and English reading room. The buildings will be presented to the German Dispensary Association, and when completed with all their equipments will cost about two hundred thousand dollars.

Correspondence.

NEW YORK LETTER.

Mr. Editor, — After the wild outcry that was made by the New Code men about the recent action of the Academy of Medicine in instructing its Committee on Admissions to carry out the provisions of the by-laws of the academy, which require its Fellows to support the National Code of Ethics, by refusing to propose for election to membership the names of any physicians who are unwilling to do this, it is certainly somewhat surprising to find that at the last meeting of the County Society, May 28th, these same gentlemen packed the meeting and adopted the following amendments to its by-laws: —

"1. The members of this Society shall be governed by the Code of Ethics adopted by the Medical Society of the State of New York, February 6, 1882.

"2. No person shall be eligible for membership in this Society who is a member of a county society not entitled to representation in the Medical Society of the State of New York."

How sadly, alas, is the jewel, consistency, besmirched! Have the journals and the speakers and writers who but yesterday were pleading so eloquently for fair play, not even one little protest to make against "gag-law" now?

This high-handed over-riding of the by-laws of the Society, by which immediate action was secured on the above amendments, was justified (?) on the ground that it was necessary in order to bring the by-laws of the County Society in accord with those of the State Society.

The following amendment to the by-laws, proposed at the same meeting, was laid over, under the rules, until the annual meeting of the Society in October: "No member of this Society shall assume any sectarian designation indicating that his practice is based on any special doctrine, or dogma, or specified method of treatment." Yours very truly, †.

Miscellany.

DIPHTHERIA SPREAD BY MILK.

The *British Medical Journal* (May 5th) describes a rather remarkable epidemic of diphtheria where the causation, in its locality, if not in its nature, seems to be pretty conclusively established. It occurred toward the close of last year at Devonport, and differed from many others in its incidence upon persons of high social position. Members of the families and servants of professional men, and more especially of officers in the army and navy, including those in the highest command in both services, were the only class of people attacked. In but one single instance was a tradesman's family attacked, and no case is known to have occurred among the large working-class population. At the date of the inspection the number of known recent cases of the disease was thirty-one, of which five had proved fatal. The houses in which diphtheria occurred were of the better class, mostly in elevated and open situations; and there was nothing peculiar in their sanitary condition to account for the occurrence of the disease, nor, except in a very few instances, was there a known exposure to infection from a previous case. It was observed, however, that the greater number of persons affected with diphtheria obtained their milk from a particular dairy, upon which, in consequence, suspicion had fallen. Of the twenty-nine persons who were attacked in December, all were supplied from this dairy, with two exceptions, and one of these had certainly, and the other probably, had milk on some occasions from the same source. The dairy in question has a large trade in Devonport and Stoke, supplying about 256 houses, containing 347 families; and it is estimated that the customers who fetch milk from the shop would raise the number of families to nearly 500. There are other dairies doing a large business in the same place; but their customers, with some doubtful exceptions, entirely escaped. On visiting the farm whence the milk was obtained, no abnormal conditions were found. It was noted, however, that a well had been closed at the suggestion of the local health officer, though it was explained that the water was only used for washing carts. Two men were employed in the dairy; but neither among them and their families, nor among lodgers in the same houses, could any recent sickness be discovered. The residents at the milkshop — five adult persons — were also stated to have all been in good health; but next door a case of diphtheria had occurred early in December. In a narrow back yard behind the shop the milk cans were washed with town water boiled in a small outhouse. From this outhouse the water-closet is di-

vided by a partition; and, on pouring benzoline into the drain of the next house, in which a case of diphtheria had occurred, the smell was perceived in this water-closet. It seems not unreasonable to suppose that the infective matter may have gained access to the milk by the wiping out of the cans with cloths which had hung up in the narrow close back yard, and had contracted impurities from the atmosphere. The small proportion of customers attacked, however, shows that any contamination of the milk by infective material could have only been partial and occasional in its occurrence. In view of the special incidence of the disease upon families of the well-to-do, and of the condition of the milkshop premises, it is suggested whether the cream, standing as it did the longest time in the shop, might not have been especially the vehicle by which the infection was conveyed; no facts, however, were met to corroborate this view. It is significant that many of the persons attacked were constitutionally liable to sore throat. A chronic ulceration of the throat, a ragged tonsil, or an enlarged mucous follicle, would naturally afford more lodgment to infective material, and a fitter soil for its development, than a healthy and unbroken mucous membrane.

RECIPES FOR ARTIFICIAL FEEDING.

IN a clinical lecture on Gastric Cancer and Artificial Feeding[1] Dr. Tyson mentions the following as the most satisfactory method of preparing peptonized milk. Thus made it is devoid of the bitterness which seems to be essential to the perfect digestion of ordinary forms of peptonized casein: —

Take one pint of skimmed milk, to which add one gill of water. Heat to 140° F. (a temperature at which the finger can be immersed for half a minute.) After taking from the fire, stir in three grains of powdered pancreatine and fifteen grains carbonate of sodium. Place in a covered kettle or jug and roll up in an impervious cloth, as, for instance, an ordinary gossamer water-proof coat, near a stove or register to keep warm. Let it remain thus for an hour and a half; it then resembles slightly thickened milk, but there is no curd. Pour it into a covered pitcher and set aside to cool in the open air.

For rectal alimentation he finds the following preparation among the most useful, the only objection being that it is a little troublesome to administer. The plan is to take from one and a half to two pounds of beef with the fat removed, and from one half to one pound of fresh pancreas. The pancreas is finely chopped and afterwards bruised in a mortar with tepid water at a temperature of 100° F. It is then strained through a cloth. The juice thus obtained is intimately mixed with the meat, which has previously been chopped into small pieces. The product is next allowed to stand at a temperature of 100° F. for two hours; it is then ready for use. This amount suffices for two daily injections. The preparation decomposes very quickly, so that it has to be made fresh every day. In a man with dilated stomach, in whom nothing could pass the pylorus, the most favorable results followed this method of feeding, and during the use of daily enemata there occurred each morning an evacuation from the bowel as natural as though the patient were living on a mixed diet and digesting it properly.

[1] Medical News, April 7th.]

THE FUNCTIONS OF THE SEMICIRCULAR CANALS.

IN the *Journal of Anatomy and Physiology*, January, 1882, Dr. P. McBride writes: "The function of equilibration could, it seems to me, be carried on just as well as if they (that is, the semicircular canals) were altogether shut off from the auditory apparatus. We must therefore assume that they have another part to play in the animal economy. It seems probable that this other function is to produce, through the ampullar nerves, reflex rotation of the head and eyes towards a point from which a sound proceeds, and that, further, the afferent impulse may, in the lower animals, coördinate and brace the muscles necessary for escaping from a danger of which sound is the first indication." This theory he founds on the following propositions: (1.) The semicircular canals are so placed that every sonorous vibration capable of being perceived as sound must necessarily cause movement of the endolymph which they contain, and of the perilymph which surrounds them. (2.) If their function be purely that of equilibration, the semicircular canals occupy an unnecessarily exposed position. (3.) The results of experiments show that stimulation, whether mechanical, chemical, or thermal, applied to the semicircular canals produces rotation towards the side stimulated. The various arguments he brings forward in support of these propositions are all directed to show that the nerve-endings in the semicircular canals are stimulated, more or less, every time a sound is perceived, and that the effects of stimulation are rotation of the head, eyes, and body towards the stimulated side, with increased activity of the muscles of that side. Dr. McBride arrives at the conclusion that one function of the ampullar nerves is to convey directly to motor centres stimuli, by the reflex action of which on the muscular system the animal is placed in a better position (1) for appreciating a repetition of the sound; (2) for seeing the place in which a sound originates; (3) for escaping from the cause of alarm.

WAIFS OF PARIS.

THE enormous number and proportion of illegitimate births in Paris are sufficiently familiar to all. But when we add to these the cases in which legitimate parents are unable or unwilling to provide for their offspring, it becomes evident that there is a vast number of children growing up whose chance of ever becoming useful members of society is very slight. The *Medical and Surgical Reporter* comments on efforts which are being made to improve this class: —

After the age of sixteen years they have no right to receive any aid or help from the municipal *Bureau de l'Assistance Publique*. Consequently these children form a class living without shelter, advice, or instruction, sleeping under bridges or in the open fields, and depending on mendicity or robbery for their daily bread. These "*enfants moralement abandonnés*" have received particular attention during the administration of the last Director of Public Charities, and through his efforts their condition has undergone considerable amelioration. All such children are received and submitted to a period of probation, and those who are found already too vicious are eliminated. The others

are either placed out to learn a trade or are sent to one of two institutions which have been created for their benefit. One is a large farm where thirty boys are received and taught gardening, horticulture, etc.; in the other, a larger institution, about one hundred are received and taught cabinet-making, etc. The results obtained have been excellent; the boys, taken from misery and squalor, appear well contented with their lot. The expense at the farm amounted to but $9000 for the year, and almost $2000 were received for vegetables and flowers. At the other institution the boys remain four years, and after a short time earn almost enough to pay the expense incurred in their maintenance. From January 1, 1881, to June 30, 1882, 1151 of these children were received through the police or from their parents; of this number 178 were sent away as already too vicious or subject to chronic disease.

REPORTED MORTALITY FOR THE WEEK ENDING MAY 26, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Diarrhœal Diseases.
New York	1,206,590	643	269	20.62	17.36	9.27	3.72	2.79
Philadelphia	846,984	374	116	12.28	7.48	4.27	3.74	—
Brooklyn	566,689	216	80	14.72	15.18	2.78	5 98	.46
Chicago	503,304	238	114	13.86	9.24	2.52	2.52	—
Boston	362,535	197	76	21.91	9.18	7.65	2.04	3.06
St. Louis	350,522	—	—	—	—	—	—	—
Baltimore	332,190	152	53	22.24	10.56	7.92	7.92	3.30
Cincinnati	255,708	109	42	18.40	13 80	4.60	.92	5.52
New Orleans	216,140	163	54	40.46	3.68	.61	.61	7.97
District of Columbia	177,638	65	13	15.38	10.78	1 54	4.62	1.54
Pittsburg (1883)	175,000	50	18	16.00	14.00	6 00	—	4.00
Buffalo	155,137	64	25	18.72	20.28	3.12	6.24	—
Milwaukee	115,578	47	24	25.56	2.13	6.39	10.65	2.13
Providence (1883)	116,755	51	16	15.68	7.84	5.88	1.96	—
New Haven (1883)	73,000	23	3	17.40	8.70	4.35	4.35	—
Charleston	49,999	25	12	12.00	4 00	—	—	8.00
Nashville	43,461	28	5	31.13	3.57	7.14	—	—
Lowell	59,485	16	6	12.50	—	—	—	—
Worcester	58,295	23	16	21.75	34 80	4.35	—	—
Cambridge	52,740	18	7	16.66	5.55	11.11	—	—
Fall River	49,006	18	7	11.11	11.11	5.55	—	—
Lawrence	39,178	15	5	6.66	6.66	—	—	—
Lynn	38,284	11	1	9.09	9.09	—	—	—
Springfield	33,340	—	—	—	—	—	—	—
Salem	27,598	14	2	7.14	—	—	—	—
New Bedford	26,875	4	1	—	25.00	—	—	—
Somerville	24,985	14	9	14.28	21.42	—	—	—
Holyoke	21,851	10	6	10.00	20.00	—	—	—
Chelsea	21,785	12	2	25.00	25.00	16.66	—	—
Taunton	21,213	7	2	—	—	—	—	—
Gloucester	19,329	9	4	33.33	11.11	11.11	—	11.11
Haverhill	18,475	9	3	22.22	11.11	—	—	—
Newton	16,995	4	0	—	—	—	—	—
Brockton	13,608	4	2	—	—	—	—	—
Newburyport	13,537	4	1	25.00	25.00	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	—	—	—	—	—	—	—
Twenty-three Massachusetts towns.	180,463	64	21	24.96	13.04	4.68	10.92	—

Deaths reported 2601 (no report from St. Louis): under five years of age 1015: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 512, consumption 420, lung diseases 340, diphtheria and croup 104, scarlet fever 101, diarrhœal diseases 57, measles 47, small-pox 46, typhoid fever 36, malarial fever 33, cerebro-spinal meningitis 23, whooping-cough 23, erysipelas 20, puerperal fever 11, typhus fever one. From *measles*, New York 18, Boston 11, Chicago four, Nashville three, Cincinnati and Gloucester two each, Philadelphia, Brooklyn, New Orleans, Worcester, Cambridge, Salem, and Somerville one each. From *small-pox*, New Orleans 41, Philadelphia and Nashville two each, Chicago one. From *typhoid fever*, Philadelphia 12, Boston four, New York, Chicago, Pittsburg, and Providence three each, Cincinnati two, District of Columbia, Charleston, Lowell, Fall River, Lynn, and Somerville one each. From *malarial fevers*, New York 11, New Orleans eight, Brooklyn five, Chicago four, New Haven two, Baltimore, District of Columbia, and Nashville one each. From *cerebro-spinal meningitis*, New York four, Chicago, Buffalo, and Worcester two each, Brooklyn, Boston, Baltimore, Cincinnati, Milwaukee, Nashville, Lawrence, Haverhill, Peabody, Milford, Spencer, Hyde Park, and Westborough one each. From *whooping-cough*, New York eight, Brooklyn, Chicago, Cincinnati, and District of Columbia two each, Baltimore, Buffalo, Milwaukee, Lowell, Holyoke, Newburyport, and Northampton one each. From *erysipelas*, New York 12, Brooklyn, Chicago, and Buffalo two each, Philadelphia, New Orleans, and District of Columbia one each. From *puerperal fever*, Chicago three, Baltimore two, Brooklyn, Cincinnati, Buffalo, Milwaukee, Providence, and Chelsea one each. From *typhus fever*, New York one.

Four cases of small-pox were reported in Buffalo, Baltimore three, Boston one, Pittsburg one; diphtheria 24, scarlet fever 22, typhoid fever four in Boston; scarlet fever 20 and diphtheria three in Milwaukee; typhus fever one in Cambridge.

In 39 cities and towns of Massachusetts, with an estimated population of 1,112,035 (estimated population of the State 1,922,590), the total death-rate for the week was 20.40 against 20.44 and 20.46, for the previous two weeks.

In the 28 greater towns of England and Wales, with an esti-

mated population of 8,620,975, for the week ending May 12th, the death-rate was 22.7. Deaths reported 3745: acute diseases of the respiratory organs (London) 402, whooping-cough 97, measles 99, scarlet fever 76, fever 44, diarrhœa 42, diphtheria 18, small-pox (Newcastle four, London three, Birmingham and Liverpool one each) 10. The death-rates ranged from 15 in Bradford to 32.9 in Hull; Derby 17.7; Leeds 19.6; Nottingham 20.9; London 21.8; Birmingham 22.1; Birkenhead 24.1; Sheffield 26.5; Liverpool 30.7. In Edinburgh 16.4; Glasgow 31.2; Dublin 31.6.

For the week ending May 5th, in 171 German cities and towns, with an estimated population of 8,527,814, the death-rate was 27.9. Deaths reported 4569; under five years of age, 2072; lung diseases 692, consumption 682, diphtheria and croup 172, diarrhœal diseases 149, measles and rötheln 71, scarlet fever 54, whooping-cough 54, typhoid fever 39, puerperal fever 24, small-pox (Breslau three, Frankfort a. M. two, Offenbach one) six, typhus fever (Königsberg one) one. The death-rates ranged from 7.8 in Kiel to 41.8 in Augsburg; Königsberg 30.4; Breslau 34.4; Munich 33.4; Dresden 30.4; Berlin 26.8; Leipzig 26.9; Hamburg 29.3; Cologne 22.7; Frankfort a. M. 25.1; Metz 18.6.

The meteorological record for the week ending May 26th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
May, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 20	29.733	53	58	46	100	86	100	95	N	SE	S	9	10	4	R	F	R	—	—
Mon., 21	29.608	58	70	55	87	86	93	89	SE	E	NE	6	13	4	O	O	O	—	—
Tues., 22	29.707	51	57	46	100	100	100	100	NE	NE	NE	14	11	15	R	R	R	—	—
Wed., 23	29.671	55	62	49	100	86	98	95	NE	NE	SW	3	13	6	G	O	O	—	—
Thurs., 24	29.829	59	69	51	86	56	74	72	W	NW	NW	11	15	8	O	O	F	—	—
Fri., 25	29.980	68	82	50	72	38	58	56	W	SW	SW	3	12	7	C	C	C	—	—
Sat., 26	29.821	71	88	60	57	38	81	59	SW	SW	S	10	16	13	C	C	O	—	—
Means, the week.	29.764	51	88					81										36.45	3.41

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; B., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MAY 25, 1883, TO JUNE 1, 1883.

HEGER, A., major and surgeon. Assigned to temporary duty in charge of the office of Medical Director, Department of the South, during absence on sick leave of Medical Director. Paragraph 9, S. O. 55, Department of Texas, May 24, 1883.

BROWN, PAUL R., captain and assistant surgeon. The extension of leave of absence on surgeon's certificate of disability granted November 23, 1882, further extended six months on account of sickness. Paragraph 6, S. O. 123, A. G. O., May 29, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING JUNE 2, 1883.

LEWIS, D. O., passed assistant surgeon, detached from the U. S. Coast Survey steamer McArthur and ordered to the Marine Rendezvous, San Francisco, Cal.

DALE, F. C., passed assistant surgeon, ordered to the U. S. Coast Survey steamer McArthur.

BROWNE, J. M., and GIHON, A. L., medical directors, ordered as delegates to represent the Navy at the meeting of the American Medical Association at Cleveland, Ohio, June 5, 1883.

GYNÆCOLOGICAL SOCIETY OF BOSTON. — The next regular meeting will be held on the second Thursday of June, at four o'clock P. M. Report by Dr. Marcy and Dr. Norris on Gynæcological Interests at the National Convention. Lunch served at close of session.

HENRY M. FIELD, M. D., *Secretary.*

NEW HAMPSHIRE MEDICAL SOCIETY. — The Ninety-Third Annual Meeting will convene in Temple Hall, Concord, Tuesday, June 19, 1883, at eleven o'clock, A. M. (1.) Annual Address by the President, at twelve o'clock. (2.) Oration, G. W. Hatch, M. D., Wilton. (3.) Surgical Paper, F. A. Stillings, M. D., Concord. (4.) Practice of Medicine, W. T. Smith, M. D., Hanover. (5.) Oration, The Great Work, G. C. Blaisdell, M. D., Contoocook. (6.) Report, Water Pollution, I. A. Watson, M. D., Concord. (7.) Report, Variola, T. J. W. Pray, M. D., Dover. (8.) Report, Pulmonary Abscess, D. S. Adams, M. D., Manchester. (9.) Report, Venesection, P. A. Stackpole, M. D., Dover. (10.) Report, Necrology, D. P. Goodhue, M. D., Springfield, Obituary Notice of the late Drs. Silas Cummings, C. A. Volk, J. W. Barney, J. C. Marshall. (11.) Volunteer Reports or Papers.

APPOINTMENT. — Reuben Noble, Esq., of Westfield, has been appointed a member of the Board of Health, Lunacy, and Charity in place of George P. Carter, Esq., whose term had expired.

BOOKS AND PAMPHLETS RECEIVED. — A Treatise on Insanity in its Medical Relations. By William A. Hammond, M. D., Surgeon-General United States Army (Retired List), Professor of Diseases of the Mind and Nervous System in the New York Post Graduate Medical School, etc. New York: D. Appleton & Co. 1883.

Tubercular Cerebro-Spinal Meningitis. By J. T. Eskridge, M. D., Physician to St. Mary's and Jefferson Medical College Hospitals. (Reprint.)

Notes on a Case of Enteric Fever which had two Relapses, with an Unusual Prolongation of the Interval between the First and Second Attacks. With Chart of Temperatures. By Robert W. Forrest, M. D. (Reprint.)

Tuberculosis. All Classes of Organized Tissues but One Nourished in Excess in Tuberculosis. By Rollin R. Gregg, M. D. Buffalo, N. Y.

Electricity in Medicine and Surgery. By George C. Pitzer, M. D., Professor of the Theory and Practice of Medicine in the American Medical College, St. Louis, etc. Second Edition. St. Louis, Mo. 1883.

A Clinical Study of Syphilis of the Eye and its Appendages. By Leartus Connor, A. M., M. D., of Detroit, Michigan. (Reprint from American Journal of Medical Sciences.)

The Principles and Practice of Medical Jurisprudence. By the late Alfred Swaine Taylor, M. D., F. R. S., Fellow of the Royal College of Physicians of London. Third Edition. Edited by Thomas Stevenson, M. D. Lond. Vols. I. and II. Philadelphia: Henry C. Lea's Son & Co. 1883.

Original Articles.

CASES OF INTERNAL STRANGULATION OF THE BOWELS. LAPAROTOMY.[1]

A. B. ATHERTON, M. D., FREDERICTON, N. B.

CASE II. F. H., male, aged nineteen, student. February 4, 1881. Generally fairly healthy. Seven or eight months ago had an attack of abdominal pain, coming on suddenly, and attended with some vomiting, which lasted most of time for three or four weeks, including a relapse. During this period there was considerable fever, and the attending physician thought he had typhoid. When sufficiently convalescent to go out he was obliged to bend over towards right side on account of pain in right abdomen when he attempted to straighten himself. After some weeks this trouble disappeared entirely.

Since then he has enjoyed good health till two days ago, when he was seized with pain in the abdomen again, similar, he thinks, to the first attack above mentioned. No cause assigned, except it might have been due to a walk of eight miles on snow-shoes two or three days before. No chill at any time. Bowels regular. Has vomited a few times.

On examination I found some general swelling and hardness of the abdomen, most marked in the right inguinal region, where tenderness on pressure was also greatest. Pulse 108; temperature 101° F.

A pill of morph. sulph. and ext. belladonna, one fourth grain each, to be given *pro re nata*. Hot applications to abdomen. Light diet, and in small quantities at a time.

February 7th. Symptoms have gradually improved. Vomiting has ceased. Pain and tenderness less. Pulse 90; temperature 99° F.

February 8th. All the symptoms have reappeared as at first. Pulse 100; temperature 100° F. Treatment as before.

February 12th. Much the same. Requires from four to six pills every twenty-four hours to relieve pain. Feels an inclination to have movement of bowels, and as there has been no stool since I saw him, I permitted the administration of a simple enema.

February 13th. Feels rather better. Bowels acted well yesterday. Pulse 96; temperature 99.5° F.

February 15th. For the last day or two the pain, tenderness, hardness, and swelling of abdomen generally have been diminishing. The swelling in right inguinal region, however, has been rendered more prominent since the subsidence of the general swelling. Decubitus has been mostly on right side for last few days, because lying on the left produces a "dragging" feeling in right swollen part. Tinct. iodinii to be applied two or three times a day till skin gets sore.

February 19th. Doing well. Swelling entirely gone. Bowels have moved twice since the 12th inst., once from enema, and once spontaneously.

February 21st, eleven A. M. Doing well. Has eaten light food with a relish for last two or three days. Pulse 88; temperature normal. One P. M. Sent for to see patient on account of severe colicky pains, with raising of wind and vomiting, which came on an hour ago. The morphine and belladonna pill to be repeated *pro re nata*. Milk and lime-water and beef tea in small quantities.

February 22d, A. M. Has taken three pills. Vomiting and raising of wind, with something like a hiccough, continue. No passage of wind per anum since yesterday noon. The pain seems rather more severe on the left side of abdomen since yesterday's attack. Very little swelling, and no hardness to be felt as before. Pulse 60; temperature 97.5° F. To have enema.

February 23d. Bowels moved fairly well after enema. Had a better night. Not much vomiting, but hiccough continues, the latter being increased on motion of the body. Pulse 52; temperature 97.2° F.

February 24th. About the same. Enema of two to three quarts of warm water given through a long tube. Part of the water came away, bringing little or nothing with it.

February 25th, ten A. M. No change for the better. Pulse 56; temperature 98.5° F.

Thinking that there must be some internal strangulation of bowels, and not caring to resort to abdominal section without a consultation, I brought the late Dr. Gregory, of Fredericton, to see the patient with me at three P. M. He advised the trial of large doses of ext. belladonna, and one grain was ordered every two hours.

February 26th, nine A. M. No improvement. Tympanites and tenderness on pressure have become more marked during the last day. Pulse 90; temperature 97° F. in mouth, 100° F. in rectum.

Twelve M. Operation. Chloroform. Bladder emptied with catheter. Assisted by the late Dr. Gregory and Mr. J. G. Owens I proceeded to operate. Incision made five inches in length from near the umbilicus down towards the pubes. On cutting through the peritonæum about a foot of distended and deeply congested small intestine presented itself, and so completely filled the abdominal opening that I was obliged to allow it to escape externally before I could examine the parts within. On doing so I found a fleshy band deep down in the abdominal cavity running longitudinally across the gut, apparently just above the cæcum. It was one and one half or two inches in length, and a little larger than a crow quill. I ligatured it in two places and cut between them. On doing this a deep groove was found in the intestine in which the band had lain imbedded. At the bottom of the groove the white fibrous tissue of the bowel was seen, while on each side was the red and swollen peritoneal coat. Contents of the distended bowel could now be squeezed down into the empty portion below constriction.

The intestine which had escaped from the abdomen had now to be punctured at several points before it could be returned to its place. A very small trocar belonging to a hypodermic syringe was employed for this purpose. Notwithstanding the size of the instrument, a small quantity of thin fæcal matter followed the gas which escaped first after the punctures. The parts were now carefully cleaned and pressed back into the abdomen with sponges. Wound brought together with silk sutures, and dressing of carbolized gauze applied. Carbolic spray was used during most of the operation. To have the morphine and belladonna pills sufficiently often to relieve all pain.

February 27th, one A. M. Has taken one and one fourth grain of morphia. Vomited once. Not so much hiccough as before. Feels easy. Slight passage

[1] Concluded from page 532.

of wind downwards for the first time in five days. Pulse 108; temperature 100° F. Eleven A. M. No opiate since last visit. Not much sleep. No vomiting. Pulse 100; temperature 100° F.

February 28th, nine A. M. Took one fourth grain of morphia last night. Has dozed considerably since four A. M. Vomited once last evening, probably on account of drinking too freely. Pulse 110; temperature normal. Asks for and may have a very little ale.

March 1st, 9.30 A. M. Slept fairly well without opiate. Feels as if bowels ought to be moved. May have simple enema. Eleven A. M. Enema brought away some semi-fluid fæcal matter, having an offensive smell. Wound dressed under spray. It looks well. Swelling of abdomen rather less. Pulse 88; temperature normal.

March 2d, 9.30 A. M. Has had two motions of the bowels since last visit, neither of them being very loose. Took one eighth grain of morphia last night. Rested well. Raises a little wind still on motion of body. Bandage tightened on account of shrinkage of abdomen. Takes only milk and lime-water, and beef tea in small quantities, together with half a glass of ale per diem. Asks for and may have a soda biscuit with ale.

March 3d. Doing well. Has had a fourth motion of bowels. No opiate. Pulse 80; temperature 99.2° F.

March 4th. Rather restless last night, but no pain. Bowels moved at midnight. Bandage again tightened on account of flattening of abdomen. Pulse 80; temperature 98.8° F.

March 5th. Wound dressed under spray. All but two sutures removed. Pulse 80; temperature 99.2° F. Asks for and may have fish cake for breakfast.

March 6th. Feels a slight stinging sensation at lower part of wound. Wound uncovered under spray, and the two remaining sutures removed. Some thin dirty-looking discharge issued from the tract of the lower one, being very nearly over the site of strangulation. The suture had, I think, somewhat of a fæcal odor. No redness, induration, swelling, or unusual tenderness about the wound. Pulse 92; temperature 99.5° F.

March 7th. Wound examined under spray; scarcely any discharge. Pulse 84; temperature 99.5° F.

March 8th. Bowels moved yesterday by enema. Wound dressed with adhesive plaster. Pulse 76; temperature 99° F. May have an egg-nog every day.

March 10th. Wound examined. No discharge. Plaster not changed. Pulse 70; temperature 98.6° F. May have a moderate amount of solid food.

March 16th. Doing well. May sit up. As bowels are constipated a mild aperient pill ordered to be taken *pro re nata*. A mixture of citrate of iron and quinine also given.

March 20th. During last twenty-four hours has had slight pain in right inguinal region. On examination I found an indurated swelling to the inner side of the anterior superior spinous process of ilium, about three inches long and two wide. No general swelling of the abdomen. Ordered to keep quiet in bed, and have morphine pill if required.

March 23d. Feeling better, but there is still some local hardness. May sit up again, but not move about as before.

March 26th. Bowels moved yesterday by enema. Some pain again to-day. Induration increased in size. Pulse 100; temperature 101.5° F. To go to bed again. Light diet. Paint swelling with tinct. iodinii.

March 28th. Better. Pulse 80; temperature 99° F. Swelling, however, much the same.

April 18th. Patient has just recovered from an attack of influenza, which seemed to give rise to an increase in the swelling of the side. It is now, however, back to its usual dimensions. When largest, its greatest readth lies between the anterior superior spinous process of the ilium and the umbilicus. At times it is quite tender; at others little so. Since last report pulse has varied from 64 to 88; temperature from 98° F. to 100° F., for the most part being about normal. Appetite fair. Bowels moved about every third day by enema or pill. He is increasing in flesh, and eats only light food. Tinct. iodinii is occasionally painted over swelling. Keeps in bed.

May 16th. Doing well for the last week. Just previous to that, however, had a slight attack of inflammatory symptoms in right side as before. May sit up again.

July 22d. Since last report, the general condition has gradually improved, but from once in every week to once in every three weeks he has had an attack of pain and increased swelling in the region above mentioned, which subsides in a few days. One or two blisters have been applied, but with little apparent effect. Bowels have moved spontaneously twice of late, for the first time since the operation.

October 28th. Attacks of pain, etc., recur every two or three weeks still. The swelling appears to be nearer to the umbilicus than formerly, and the hardness seems less, feeling more like a distended bowel. Sits up a little while every day when there is no pain.

November 17th, four P. M. Patient has been moving about the room for the last two weeks. Went into the kitchen this morning before fire was made there, the air being chilly and damp. This afternoon began to complain of a nervous, restless feeling, accompanied by coldness of extremities, but not amounting to a rigor. He was put to bed and heaters placed around him. At my visit he complained mostly of an uneasy feeling about the groins. Pulse 68; temperature 97.6° F. Countenance good.

November 18th, nine A. M. A restless night, but not much pain. Vomited several times, and raised wind often. Pulse 112; temperature 100.5° F. The local swelling in the right side is not so marked as during his customary "attacks;" slight general abdominal swelling and hardness. Not much tenderness. Hot applications, and opiates *pro re nata*. Milk and lime-water in half-ounce doses every half hour, and ice to suck.

November 19th, two P. M. Took one grain of morphine during the night. Rested a few minutes at a time throughout the night. No vomiting since yesterday afternoon. Wind raised on motion. It also passes per anum. Only slight pain and swelling in abdomen. Has had two or three attacks of palpitation of heart since yesterday, lasting a few minutes. Cause unknown. I saw him in one of them, and I could not count the pulse. It beat at the rate of 200 or more. Pulse at visit is 130; temperature 103° F.

November 20th. Rested at intervals during the night. No opiate. Pulse 116; temperature 101° F.

November 21st. Rested as before. Pulse 104; temperature 100.4° F.

November 22d. Doing well. Old local swelling

shows itself as before, now that the general swelling has subsided. Pulse 96; temperature 99° F.

November 23d. The lump is growing softer and smaller. Pulse 88; temperature 98° F.

December 5th. Doing well. All hardness seems to have disappeared. Bowels were moved two days ago by enema.

December 11th. Able to be up for last few days. Walks about a little. Appetite fair. Some fullness, I think, most of the time still to right of umbilicus. Resonance on percussion, and soft feeling on palpation.

January 4, 1882. None of his old "attacks" since last report. Has been out twice, once on foot and another time in a sleigh.

February 17th. Yesterday had a somewhat difficult motion of bowels, and felt chilly afterwards, on account, he thinks, of room being colder than usual. To-day feels some pain in left side of abdomen, requiring opiate.

February 25th. Had a motion of bowels yesterday for the first time in a week. No inconvenience followed. Pulse and temperature normal. No swelling was observed in the right side, as used to be the case after attacks of pain.

March 13th. Doing well. Goes out occasionally when the weather is suitable.

May 15th. Is out nearly every day. Says there is a "conscious feeling" still in the right side of abdomen, as if he realized a movement there more than elsewhere.

August 20th. Went home a few weeks ago by rail, a distance of about two hundred miles.

After his arrival suffered from an attack of subacute rheumatism or scrofulous affection of one knee and wrist, causing swelling and increased effusion of synovia into knee-joint.

September 20th. Much better of joint affections at last report.

October 24th. Heard that he was doing well, and had entered upon the study of law in a lawyer's office.

Remarks. There can be no doubt, I think, that a local peritonitis in this patient was the cause of the formation of the band across the gut in the summer of 1880, and that it was tightened by the attack of peritonitis during the first week of February, 1881. This finally led to total obstruction of the bowel on February 21, 1881, for which I operated just five days afterwards.

The most plausible explanation of the subsequent attacks of local swelling and inflammation I suppose is, that the bowel gave way at the line of constriction, and at times small quantities of fæcal matter escaped through the opening thus formed. A wall of lymph having been thrown out about this part, there took place no general extravasation into the abdominal cavity, and after a time all the fæcal matter was discharged again into the bowel, and the opening healed, leaving a constriction of the gut at this point. I am led to believe this the more readily, because of the appearance of the intestine at the line of strangulation at the time of the operation. It looked then as if the band across it had already nearly cut through into its cavity.

The history of both my cases seems to forcibly impress on us the importance of operating in all such instances as early as possible after a correct diagnosis has been made, and after, of course, a certain amount of trial has been had of opiates and the use of large enemata through a long tube. Just as in strangulated hernia the danger consists more in delay than in the operation, so to a certain extent it is with internal strangulations. It would undoubtedly have been better for both my patients had the operation been done a day or two sooner than it was.

A CASE OF EMPYEMA.[1]

BY M. H. RICHARDSON, M. D.

HENRY S., thirteen years old, Bangor. His father died of cancer of the stomach. Previously well, he had, on December 28, 1881, a chill, vomiting, pain in the chest, and cough without expectoration, which were followed by fever with evening exacerbations, progressive emaciation, occasional chills, loss of strength, etc. During the winter he was under the care of a homœopathic practitioner, who treated him for "enlargement of the liver." In March, 1882, he was seen by Drs. W. H. Simmons and Mason, of Bangor, who aspirated the chest without result. The temperature then ranged between 101° F. and 103° F., being always highest at evening. There was slight cough without expectoration. The sleep was good, appetite very good, bowels free. The sweating, previously very profuse, now diminished very much. There was great emaciation, and the patient was in bed most of the time. There were the signs of moderate effusion in the right chest. The liver was not enlarged.

The child came to Boston in May, and the chest was punctured by Dr. Minot in the eighth interspace, below the angle of the right scapula, but no fluid was obtained. He went to Washington and Atlantic City, returning to Boston September 9th.

I first saw the case on the day of the operation, September 18, 1882, with Drs. Minot and Knight. The patient was extremely emaciated, very pale, and so weak that he got about with the greatest difficulty. It was impossible for him to stand erect. His face was pinched and drawn, and his whole appearance was that of a painfully decrepit old man. His weight was about fifty-seven pounds, seventy-five to eighty beingthe greatest weight he had ever known. Sputa very offensive.

Patient was etherized, and the needle of the aspirator introduced in the seventh intercostal space, in the middle axillary line. A few drops of pus were obtained. To determine whether the point of the needle was in a cavity of pus too thick or too flocculent to pass through, I used an exploring sound which I had devised for such cases, which gave evidence of the existence of a cavity. A very large trocar was then attached to the vacuum bottle and introduced through the first puncture, by which a few ounces of dark and exceedingly fetid pus were obtained. It having been thus determined that pus was there, a free incision, one and one half inches long, was made through the eighth intercostal space, cutting on the exploring director in the usual way. Much to our disappointment it was impossible to reach the cavity in this place. The point of the knife seemed to be in a solid friable mass. On introducing the finger I could feel what seemed to be degenerated lung tissue, easily broken up, and extending as far as the finger could reach. It was next thought best to make another incision in the space above. This was done with rather unsatisfactory re-

[1] Read before the Section for Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, March 14, 1883.

sults. There was some escape of pus and considerable hæmorrhage. On introducing a double drainage tube hæmorrhage ceased entirely. The character of the mass into which the knife had penetrated was the same as before. It seemed possible to introduce the finger or the probe indefinitely.

Carbolized gauze was applied in the usual manner. The regular antiseptic method was used throughout, but the spray was out of order, and was very unsatisfactory. Recovery from ether was complete, and patient seemed in good condition.

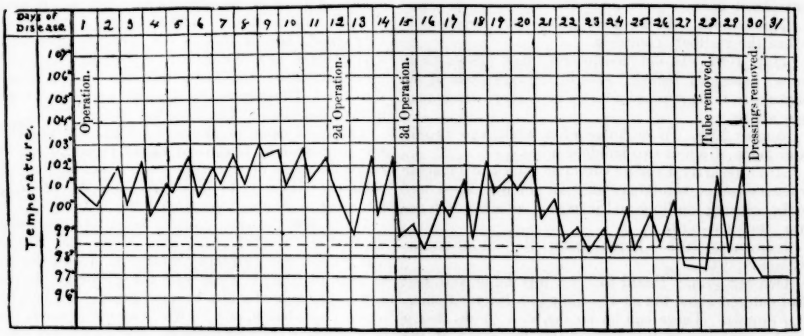
On the following day the dressing was changed. There had been no discharge whatever. The boy was very fretful, and complained very much of pain from the tubes, and discomfort of the dressings. It was now possible to observe how extreme the emaciation was, and how great the deformity of the thorax. On the affected side the chest bulged very much, and there was a marked deviation of the spine to the left. The whole right side was flat except at apex before and behind, where there was some resonance and respiratory murmur. There were no adventitious sounds in respiration, however, and there had been none. Bad taste gone.

During the next ten days things remained about the same, though the patient seemed on the whole somewhat relieved. The daily average temperature gradually increased, and it seemed probable that there was still a collection of pus which had not been reached in the first operations. At every dressing I tried all possible means of striking the concealed collection that I dared. Bougies could be introduced through the friable tissues several inches in all directions. Tin sounds answered the purpose very well, and could be gently forced into the thorax to various depths. Bougie catheters were also used without success.

This condition of things lasted until September 30th, when I noticed a small fluctuating tumor at the cicatrix of the first incision in the eighth space, which meanwhile had healed. On opening up this wound dark pus of the most offensive nature spurted out to the amount of three pints, and gurgling of air with the efforts of respiration proved that the pleural sac had certainly been reached at last.

When I attempted to introduce drainage tubes into the cavity, however, I found the greatest difficulty, and besides the probable explanation of all previous failures. The tin sound showed that the track followed by the pus in its escape left the thorax in the eighth intercostal space, about two inches from the spine, ran along the space itself, and appeared at the first incision. In order to reach the cavity with the sound, it had to be passed backwards and upwards four inches, and then by a sharp turn the sac was found. A long, single drainage tube was inserted well into the cavity with free drainage, as shown by reflux of carbolic solution and passage of air to and fro with the movements of respiration. The temperature fell at once, and very rapidly, two degrees within an hour after evacuation. Resonance and respiration were at once improved in the upper part of the lung.

On the next dressing, a day later, absolutely no discharge was visible, though the tube was perfectly clear. Temperature slightly elevated in the evening. During the two following days the temperature rose to 102° F. in the evening, and the tube seemed ob-



structed. Air no longer escaped during coughing, etc., and it was thought that the tube had in some manner been displaced from its uncertain and insecure position.

October 3d, however, I was called very early in the morning to find that about a pint of pus had suddenly escaped through the drainage tube.

The chest was washed out as before with one to eighty carbolic acid, and dressings reapplied.

From this moment the discharge from the chest disappeared entirely and completely; with the exception of a few drops of pus from under the shield of the tubes nothing whatever could be found. The dressings were continued daily because the patient was much more comfortable with fresh gauze. As will be seen by the chart the temperature was not satisfactory during the five days, though the average was considerably better. The absence of discharge during these days was a source of great annoyance, because it seemed from the temperature and from our previous experience that there must still be pus retained. Physical examination during this time showed continually increasing resonance and respiratory murmur. In the region of the incision, however, and in the anterior base, there was much dullness and little if any signs of

expansion. Daily attempts were made to explore the track of the tube, as before, without any results. The general health was improved; appetite and sleep were better; there was less complaint of pain from the bandages, and much less fretfulness.

October 8th, there having been no discharge since the 3d, Dr. Minot advised shortening the tube, which was accordingly done to the extent of an inch.

During this time, that is, since the reopening of the eighth space, that in the seventh had entirely closed, and nothing was left except a small granulating surface. With the shortening of the tube, which was daily made, the temperature began to fall, and the patient to improve. Finally, October 16th, about four weeks after first operation, it was removed altogether. The temperature continued to jump about in the most remarkable manner, and it was thought advisable to remove the dressings altogether. The spray was accordingly abandoned, and a light carbolic gauze compress, sufficient to keep the granulating surface aseptic, substituted. Morning temperature was below normal, and evening not taken, and two days later it was omitted altogether, having become a source of great annoyance to the patient, anxiety to the mother, and bewilderment to the physician.

From this time convalescence, already begun, proceeded with astonishing rapidity. There had been no cough during the latter days of the Lister; the appetite had become enormous, and the general appearance of the patient wonderfully improved. By November 1st his clothes were too small for him, and before Christmas he weighed eighty-seven pounds, and could not be recognized as the same boy who had been limping about with so much difficulty three months before.

In reviewing this case the interesting points to me are, first, the apparently clear diagnosis of purulent effusion, which the aspirators failed to verify; the unfavorable prognosis which made the operation an almost hopeless last resort; the difficulty experienced in finding the pus cavity, and having found it of keeping it open long enough for the lung to expand and fill it; the remarkable absence of any and all discharge when the drainage was certainly free; and, finally, the almost instantaneous establishment of convalescence on removing the tube and dressings.

With regard to the first point it is my opinion that the pus was too thick to run through the needle, — or it was flocculent, — and that the existence of a fluid-filled cavity could have been demonstrated with the exploring probe. The prognosis, though unfavorable, was not absolutely so, because there were no signs of disorganization on auscultation or percussion.

The difficulty in penetrating to the pus cavity was due, I think, to the existence of fibrinous tissues, found between the diaphragm and base of lung, of considerable thickness. Had the opening been made three or four inches from the spine in the same space, I believe we should have had no difficulty in immediate and easily maintained drainage.

The absence of discharge seems to me remarkable even in the light of modern aseptic operations for empyema. There was not even a serous discharge. The lung must have expanded immediately, and thereby filled entirely the pleural sac. The rapid convalescence and sudden cessation of high temperature are explained, I think, by the patient's very great irritability. He complained excessively of the discomfort of any and all restraining bandages, was very much annoyed by the tubes, and, as a result, I am inclined to think he worried himself into a fever. He was so intelligent that he always was much depressed by an unfavorably high temperature, and that improvement was thereby retarded I am sure. For this reason I omitted it altogether. In the light of the later days of the case I am convinced that the tubes might have been removed a week sooner.

REPORT UPON THE INSPECTION AND ADULTERATION OF FOOD AND DRUGS.

BY DR. B. F. DAVENPORT.

A BILL to take away the execution of the Adulteration of Food and Drugs Act of the year 1882 from the control of the State Board of Health, Lunacy, and Charity was defeated in the Senate on May 31st. The two analysts appointed under the provision of that act are therefore continuing their work of examining series of samples of the more important articles of food and drugs sold in the markets of this State, to ascertain which of these are at present adulterated, as well as the constituents and proportions of the foreign substances. Their monthly reports made to the State Board have not yet been published, as the first year of the work has not been completed. These analysts have, however, thus far reported upon some five to six hundred samples examined by them.

The inspector of vinegar for the city of Boston, in his last annual report upon some 300 samples of vinegar, says that of the cider vinegars obtained by him from stores in the city only about one sample in ten proved to be of good quality. The rest were commonly either some variety of so-called white wine vinegar colored and flavored with a little more or less of true cider vinegar, to imitate the genuine article, or else a partially made and watered cider vinegar, which has had its acidity somewhat increased by the addition of acetic acid.

The inspector of milk for the city has reported upon his inspection of 1153 samples of milk, of which he had only 14 analyzed as adulterated, as they all proved to be. The analyst of food for the State Board, however, who himself analyzes *all* of his samples, has found only about ten per cent. of his samples to be *un*adulterated with water. This, like the observations made by the present inspector of vinegar, shows the different results which are obtained by skilled scientists, amply able to do all their own work, as compared with those inspectors who have hitherto been appointed under the former various anti-adulteration laws in this State. Under those provisions contained in Chapter 208 of the Public Statutes, although they have been the law so long, a single conviction has never yet been obtained, and they might as well be now repealed.

The last Report of the New Jersey State Board of Health, which acts under a similar law to that of Massachusetts and New York, contains an important article upon Health, Invalid and Infant Foods, by Prof. A. R. Leeds, of the Stevens Institute in Hoboken, one of the Public Analysts. It ends with the following table of analyses of infant foods and conclusions therefrom, which should be compared with the average human milk containing its natural amount of water, and also with the same reduced to a nine per-centage of water: —

	Water.	Fat.	Sugar.	Starch.	Albuminoids.	Salts.
Natural human milk has	89.00	3.00	5.00	0	2.65	0.35
Same reduced to 9 per cent. of water	9	24.82	41.36	0	21.93	2.89

INFANTS' FOODS.

	Moisture.	Fat.	Grape Sugar.	Cane Sugar.	Starch.	Soluble Carbohydrates (Dextrine, Grape and Cane Sugars).	Albuminoids.	Gum, Cellulose, etc.	Insoluble Residue.	Total.	Reaction.
Baby sup. No. 1	5.54	1.28	2.20	11.70	61.99	14.35	9.75	7.09		100.00	Neutral.
Baby sup. No. 2	11.48	0.62	2.44	2.48	61.96	22.79	7.92	5.24		100.00	Slightly alkaline.
Gaber & Co.'s Milk Food	6.78	0.83	2.36	2.36	82.48	3.56	9.43			101.79	Slightly acid.
Hills & Mayer Infants'	6.23	2.33	2.40	2.39	77.96	5.19	9.24			102.25	Neutral.
Victor Baby Food	7.49	1.02	0.62	19.92	63.45	20.64	8.87			101.97	Slightly acid.
Anglo-Swiss Milk Food	6.64	2.72	23.29	21.40	34.55	46.43	10.26			100.50	Slightly acid.
Horlick's Food for Infants	3.39	0.08	24.99	12.45		57.20	6.71		2.72	100.00	Slightly acid.
K. & M. Infants' Food	27.75		38.75	7.93		44.88			0.68	100.00	Neutral.
Nestlé's Milk Food	4.72		1.07	33.33	40.16	8.23	8.23			100.00	Slightly alkaline.
Hawley's Liebig's Food	6.00		40.57	3.44	10.97	16.64	5.38			100.10	Slightly acid.
Hazard's Graham Farina	9.12	0.81	2.19	2.49	69.68	6.35	8.48	5.56		100.00	Neutral.
Cereal Milk	9.33	1.01	4.60	15.40	58.42	20.00	11.06			100.16	Slightly acid.
Mellin's Food	5.85	0.45	44.76	3.51		48.44	7.15		8.46	100.00	Slightly alkaline.
Imp. Wheat Food	9.00	1.05	1.67	1.51	64.80	13.69	7.16	2.94		100.00	Neutral.
Savory & Moore's Infants' Food	8.94	0.40	20.41	9.08	36.36	44.83	9.63	0.44		100.00	Neutral.
Hubbell's Prepared Wheat Food	7.78	0.41	7.56	4.87	67.60	14.29	10.13	Undetermined.		100.21	Neutral.
American Swiss Milk Product Co.	5.68	6.81	5.78	26.43	30.85	45.35	10.54	0.77		100.00	Acid.
Wheat Flour for Hubbell's Wheat Food	5.32	1.01	75.34	trace	7.40	7.40	10.94				Neutral.
Imp. Pearl Barley	5.49	1.01	trace	0.90	78.93	3.56	10.51	0.50		100.00	Neutral.
Robinson's Patent Barley	10.10	0.97	3.08	4.11	77.76	4.11	5.13	1.93		100.00	Neutral.
Farwell and Rhine's Gluten Flour	12.67	0.84	2.23	1.42	68.36	7.23	10.39	0.51		100.00	Neutral.

Dr. Leeds finds certain imperfections unavoidable in the above foods, which he classifies as the farinaceous, the Liebig's, and the milk variety of foods. The first variety are in no case, and cannot be by any process of cooking or baking at present known, so far altered in composition that the largest part of their starch is converted into sugar and dextrine. They are of necessity mainly starch, and for this reason are not well adapted for infant food. The Liebig's foods are very deficient in albuminoids as compared with the carbohydrates. This objection would be fatal to their continued use unless when accompanied by a sufficient amount of milk to change entirely the relative proportion of ingredients. This being the case, and the amount of milk being large, their quality as food would largely depend upon the quality of the milk used in connection with them. They cannot be made even in this way to exhibit such a ratio of carbohydrates to albuminoids as exists in human milk. The third class, the milk foods, has about half the amount of starch which is present in the first class, and about the same amount of albuminoids. It is open to the great objection that its ratio of saccharine matters to the albuminoids is still too high. Thus while the market supplies many more or less excellent infant foods, one not open to these objections and entirely satisfactory has yet to be made.

Under the New York State law, similar to that passed in this State in 1882, the Sanitary Committee, in their last returns to the State Board of Health, report that of 119 samples of food examined, 50 had been found to be adulterated, while of 75 samples of drugs 32 had been found to be adulterated.

The food samples were as follows: —

Articles.	Number Examined.	Found Adulterated.
Allspice	5	3
Arrowroot	1	0
Baking powder	1	0
Baking soda	21	1
Butter	1	0
Catsup	1	0
Candy	1	0
Coffee	18	4
Coffee extract	2	2
Cinnamon	7	4
Cream tartar	28	22
Cloves	6	4
Flour	3	0
Ginger	2	0
Isinglass	1	0
Mustard	6	6
Pepper	8	4
Saleratus	2	0
Sugar	1	0
Vinegar pickles	4	0
	119	50

The drug samples were: —

Articles.	Number Examined.	Found Adulterated.
Arrowroot	4	2
Bismuth subnitrate	1	0
Cocoa butter	4	2
Cream tartar	7	0
Ipecac root	7	4
Jalap	4	1
Magnesia citrate	1	1
Mustard	6	4
Orris root	5	2
Opium	1	0
Quinine sulphate	4	1
Rhubarb	9	4
Sarsaparilla root	1	0
Saffron, Spanish	7	3
Sulphur precip	13	7
Wax, white	1	1
	75	32

The last Report on Adulteration of Food in Canada, made by the Commissioner of Inland Revenue, shows that out of 1122 samples 288 were surely adulterated, while 25 were doubtful. They were as follows: —

Names of Samples.	Number.	Adulterated.	Doubtful.
Baking powder	17	0	0
Bread	81	1	1
Butter	197	48	8
Canned fruit	26	2	0
Chocolate	54	0	0
Cocoa	53	10	0
Coffee	69	47	0
Flour	18	0	0
Ginger	23	16	0
Milk	202	59	13
Pepper	43	28	1
Potted Meats and Fish	23	3	0
Spices	66	32	0
Sugar	65	0	0
Sweets	66	5	0
Tea	88	23	2
Water	29	14	0
	1122	288	25

The last annual Report of the Society of Public Analysts of Great Britain shows that out of the 17,868 samples examined by the seventy-eight analysts 2960 samples were found to be adulterated, that is, 16.56 per cent., while for the five preceding years the percentages had been 17.47, 17.25, 16.58, 17.70, and 18.10. The following was found to be the percentage rate of adulteration found in the following classes of samples:—

Milk	19.96%
Butter	12.67%
Groceries	9.70%
Drugs	19.09%
Wine, Spirits, Beer	23.94%
Bread and Flour	4.23%
Water	26.17%
Sundries	5.00%

In France food analysis for the suppression of adulteration is carried on in the municipal laboratories, established under the general national law, in Paris and most all of the other large cities of the country. M. Ch. Girard, chief of the Paris laboratory, has made a very elaborate report to the Prefect de Police of the last year's work, which the city has published in a quarto volume of 548 pages. This laboratory has directed its attention not only to the matter of adulteration in the samples of food submitted to it by the police and by the public at large, but also to the determining by means of numerous analyses of the average composition of all of the most commonly used articles of food. For this work the chief is very liberally supplied with all the desirable means for his twenty-five employees. The inspectors visited 24,655 shops, inspected 1570 beer pumps, attended to the retinning of 5572 copper cooking utensils, destroyed 394 samples of manifestly damaged provisions, and made 6258 analyses of samples of which 1565 were found to be good, 1523 passable, 2608 bad (but not injurious), while 562 were bad and injurious. The report covers the subjects of waters, wines, beers, ciders, alcohols and liquors, vinegars, milk, butter, oils, flour, bread, pastry, preserves, chocolate, coffee, tea, pepper, sugars, honey, dried fruits, vegetable juices, syrups, confectionery, tinning of copper cooking utensils, colors on children's toys, meats, perfumery and toilet articles, photography as related to the microscope, and other uses of interest to the analyst, the employment of the electric light in theatres, and the inspection of beer pumps, all of which are elaborately treated. This report and Dr. J. König's Chemische Zusammensetzung der Menschlichen Nahrungs- und Genussmittel, 2 Auf., Berlin, 1882, are two of the most important contributions to the subject of food adulteration published during the past year.

In Germany the general imperial law, passed May, 1879, is the one still in force, very many of the different provinces and cities having their further special statutes. In Austria the law was passed in 1870, and in Switzerland the laws in the various cantons have been passed since 1875. In Italy there is not as yet any general national law, but in all the cities there are health commissions which have the supervision of trade in articles of food. Since 1870 there have been fourteen stations for investigations in agricultural chemistry established where many analyses of foods have been made. Of these that at Turin has been the most active in this direction.

In Holland Amsterdam alone has a bureau for the examination of food. This acts under the law passed in 1878.

In Sweden there are no special government officers appointed for the inspection of foods, examination of such being, however, carried on at the agricultural institutions, founded since 1856, in the university cities of Stockholm and Upsala, and at some five more chemical agricultural stations in smaller cities, founded since 1877. In Norway the Agricultural Institute is at Aas.

In Russia the only inspection of food is by the medical authorities except at Riga and Charkow, where there are chemical institutes aided by the cities. The same is true in Poland, except that Warsaw does it by its city medical authorities.

Fuller details of these laws upon the Continent are given by König in his Beatand und Einrichtungen der Untersuchungsämter für Nahrungs- und Genussmittel, Berlin, 1882.

Reports of Societies.

THE AMERICAN SURGICAL ASSOCIATION.[1]

SECOND DAY.

AN executive session was held at the beginning of the morning session at which Drs. James McCann, of Pittsburgh, Christian Fenger, of Chicago, W. E. Taylor, of California, W. F. Peek, of Iowa, and N. P. Dandridge, of Cincinnati, were elected by ballot to Fellowship in the Association.

PROF. S. D. GROSS read a paper on

THE VALUE OF EARLY OPERATIONS IN SURGERY,

especially considering the application of this principle of early operation to morbid growths, both malignant and non-malignant. The local origin of morbid growths was insisted upon, and the danger of extension of malignant cells, by infiltration to surrounding tissues, was cited as affording the strongest grounds for early extirpation.

DR. BASIL NORRIS, United States Army, of Washington, read a paper detailing a number of cases of

DISLOCATION OF THE ASTRAGALUS,

based particularly upon an experience with the injury in question in his own person. The following description of the phenomena attendant upon this in-

[1] Concluded from page 543.

jury in his case is from a letter from Dr. N. S. Lincoln, the attending surgeon.

The foot was turned inwards at right angles with its normal position, and a prominence, perceptibly formed by the displaced astragalus, extended over the cuboid bone, posteriorly beneath the outer ankle. The integument was stretched almost to the point of rupture over the beak-like anterior extremity of the astragalus, over the external malleolus, and to a less degree over the external process of the astragalus. There was a triple dislocation of the astragalus above from the tibia, and beneath and anteriorly from the os calcis and scaphoid.

DR. P. S. CONNOR read a very interesting paper upon

EXCISIONS OF THE TARSUS,

accompanied by a statistical report of 106 cases which he had collated from medical literature. The superiority of excision over amputation in cases of chronic tarsal disease was fully demonstrated, it having the additional advantage of permitting amputation to be subsequently performed if found necessary, and affords in addition the possibility of a useful foot.

Two patients were presented upon whom the operation of complete excision of the tarsus in adult men was performed seven and eight years ago. They are both able to walk without support, and earn their own living by active daily work.

DR. MARKS, of Milwaukee, reported a case of

GUN-SHOT WOUND OF THE CHEST,

in which the ball penetrated the sternum, giving rise to abscess and necrosis. Nearly eight years afterward the case came under the care of Dr. Marks, who trephined the sternum, and found the ball, which had become encysted in a fibrous capsule. The sinus remained open for some time, but finally closed, and the patient entirely recovered.

AFTERNOON SESSION. INTRA-CAPSULAR FRACTURE.

At the opening of the afternoon session DR. E. M. MOORE, of Rochester, read a paper upon Some Questions with Reference to Intra-Capsular Fracture, and DR. SENN, of Milwaukee, read part of a treatise entitled Fractures of the Neck of the Femur, with Special Reference to Bony Union after Intra-Capsular Fracture. This paper was very thorough and elaborate, and was divided up into distinct headings or chapters. Containing a large number of observations based upon physiological experiments, it studied particularly the pathology of fractures of the neck of the femur, and the results of treatment. He advocated accurate adaptation of fragments, immobilization, and rest. By the application of a plaster-of-Paris bandage, combined with an apparatus which he presented for making pressure in the direction of the axis of the neck of the thigh bone, he claimed that the best results can be secured without confining the patients absolutely in bed. Bony union was the rule in his experiments, and he claimed that a specimen which he had presented at the last meeting, and which he again submitted for examination, was a case of this kind. The possibility of bony union after intra-capsular fracture was established beyond question, he claimed, by experience, and he presented a table which contained fifty-four cases of similar character. The fixation of the fragments by the insertion of an ivory or bone peg he thought justifiable, and likely to promote bony union.

These two papers led to a general discussion, which occupied the rest of the afternoon, of the treatment of fracture of the neck of the femur, and the possibility of bony union within the capsule, which elicited considerable theoretical criticism of Dr. Senn's methods. The discussion was rather rambling and desultory, and no general agreement was arrived at with regard to these important questions. Dr. Senn promised to report results of his methods at a future time.

THIRD DAY. MORNING SESSION.

A specimen of

ANOMALOUS ANEURISM

presented by DR. J. G. RICHARDSON on the first day having been referred to a committee, it reported that the case was one of original bulging of the vein at the point of injury, there being an adhesion between the artery and vein, and associated changes in their walls, incident upon contusion and subsequent softening, caused by the original injury. The venous tumor projected finally into the lumen of the femoral artery, and gave rise to a secondary aneurism of the femoral artery, the permanently fluid condition of the contents of the tumor being favored by the intermitting contractions of the thigh muscles which alternately emptied the sac and allowed it to refill with venous blood.

DR. S. W. GROSS read a report of a case of

NEPHRECTOMY FOR CARCINOMA AND PARTIAL CHOLECYSTOTOMY FOR GALL-STONE IN THE SAME SUBJECT.

The operations were performed simultaneously. The case was that of a lady who had suffered much pain from an abdominal growth first noticed three months previously, and which Dr. Gross decided, after careful examination, to be malignant disease of the kidney. Laparotomy by median section was performed, and the right kidney, transformed into a cancerous mass, removed. At the same operation the gall-bladder was found to contain several calculi and cholecystectomy was performed. The patient died on the second day from peritonitis.

DR. J. EWING MEARS read the report of a

NEW OPERATION FOR RELIEVING CLOSURE OF THE JAW DUE TO CICATRICAL CONTRACTION FOLLOWING INJURY.[1]

DRS. HUNTER, MCGINN, POST, and BRIGGS spoke of cases of exsection of part of the maxillary bone for the relief of the condition, but without very promising results.

DR. A. VANDEVEER, of Albany, reported several cases of

REMOVAL OF MERKEL'S GANGLION FOR THE RELIEF OF TRIFACIAL NEURALGIA.

In these cases removal of part of the infra-orbital nerve was also performed; complete relief was obtained in three patients.

In the discussion which followed the removal of the ganglion was condemned on anatomical and physiological grounds; all the good results, it was claimed, were attributable to the operation upon the adjoining nerve trunks.

[1] This case was referred to in the Boston Medical and Surgical Journal, page 307, No. 13 of this volume.

ELECTION OF OFFICERS.

The Nominating Committee presented a report, and the following were unanimously elected: E. M. Moore, of Rochester, President; W. W. Dawson, of Cincinnati, and C. H. Mastin, of Mobile, Vice-Presidents; J. R. Weist, of Richmond, Ind., Secretary; J. Ewing Mears, of Philadelphia, Recording Secretary; P. S. Conner, of Cincinnati, Member of Council.

The next meeting will be held in Washington, D. C., on the Wednesday preceding the meeting of the American Medical Association.

AFTERNOON SESSION.

A ballot for new members resulted in the election to Fellowship of Dr. Thomas M. Markoe, of New York.

AMENDMENTS AND RESOLVES.

Amendments to the Constitution, increasing the limit of membership to one hundred and fifty, and changing the mode of nominating Fellows, were both lost.

Amendments were laid over as follows: One increasing the Council to ten members; one enabling all amendments to the Constitution and by-laws to be acted upon on the last day of each session instead of being postponed for one year.

Resolutions regarding expenses of meeting were passed.

It was also resolved that the Association give an annual dinner at its meeting.

DR. J. M. BARTON presented

A NEW AND SIMPLIFIED SPLINT FOR MAKING EXTENSION AT THE WRIST-JOINT.

This apparatus consisted of a small wire splint going under the fore-arm to extend from the elbow to the palm of the hand. At its distal extremity it had a roller, over which the extending strap was to be passed and then reflected back under the splint, to be fastened by a rubber bound to the upper end of the splint, making elastic extension of the wrist. The hand was secured by means of an ordinary kid glove with the middle and ring fingers slit up, the others being cut off; this being sewed on the hand, the under portion of the glove fingers were tied or twisted together and brought under the palm and attached to the rubber; thus a means of extension was secured for attachment to the splint by the rubber strap; when applied this apparatus maintains steady continuous traction upon the wrist-joint. It was held in place by adhesive straps and a roller bandage. He had treated several cases of synovitis of wrist-joint in this way with great benefit. The splint is small and light, and can be worn without exciting notice. A patient was exhibited wearing the apparatus.

DR. DAVID PRINCE, of Jacksonville, presented

A RECTAL OBTURATOR,

consisting of a Wales' bougie of rubber, combined with a pad designed to occlude the anus from the inside, and prevent the escape of water. The apparatus was described in a communication to the *St. Louis Medical and Surgical Journal* (February, 1883).

A volunteer paper was read by DR. WM. F. CAMPBELL, of Augusta, Georgia, upon

STRICTURES OF THE ŒSOPHAGUS.

Dr. Campbell called attention to the frequency of cases of burning of the œsophagus by accidental swallowing of condensed lye, and suggested that legislation might be required in order to prevent the common and careless use of this dangerous article of household economy.

He related several cases of dilatation of the œsophagus by graduated bougies, and he insisted upon the value of intestinal digestion by nutrient enemata.

DR. PRINCE reported a fatal case of caustic lye stricture of the œsophagus in which he had employed the constant current as recommended in urethral strictures.

CODE OF ETHICS.

A recess of fifteen minutes was taken in order to permit a meeting of the Council, a printed petition in opposition to the Code of Ethics, bearing the names of some of the members of this Association, having been, on motion, referred for its consideration.

The Council recommended the passage of the following resolution: —

Resolved, That the Secretary be instructed to address a communication to each Fellow, active or honorary, who is alleged to have violated the Code of Ethics adopted by the American Surgical Association, and request him to withdraw from this body if the allegation be true.

This report was adopted.

LIBRARY OF THE SURGEON-GENERAL'S OFFICE AND INDEX CATALOGUE.

A resolution was introduced by DR. BENTEALL and adopted, calling attention to the precarious condition of the Library of the Surgeon-General's Office, and calling upon Congress to supply proper funds to publish the Index Catalogue, to maintain the Library, and provide for it a fire-proof building.

DR. CAMPBELL presented, on behalf of Dr. John Coleman, of Augusta, Georgia, an Apparatus for Fixation of the Elbow in Dislocations and Injuries of this joint, accompanied by a report of cases.

DR. BENTEALL mentioned some cases of Cystitis relieved by perineal section and irrigation.

There being no further business, PROFESSOR GROSS gave some remarks upon retiring from the office which he had filled for four years, congratulating the Association upon its prosperity, in which he had been so deeply interested.

Before adjourning the Committee of Arrangements were authorized to make such changes in the time or place of meeting as might be judged wise after the decision of the place of meeting of the American Medical Association. Adjourned.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M. D., SECRETARY.

MARCH 14, 1883. Meeting called to order at eight o'clock by DR. G. B. SHATTUCK, chairman.

DR. M. H. RICHARDSON reported a very curious and interesting

CASE OF EMPYEMA,[1]

which he prefaced by a few remarks upon the unexpected features which are sometimes observed to accompany this disease, and which warrant the presentation of the subject again to the Section.[1]

The failure to obtain fluid by means of the aspirator is a frequent experience, and may be due to several causes. The effusion in the chest may be of unusually dense consistency, and may contain flakes of fibrine or agglomerations of pus cells which may mechanically occlude the fine channel of the aspirating needle; or the needle may possibly fail to reach a circumscribed effusion of fluid, and so nothing will flow from the canula; again, the point of the needle may be caught and retained by a partition or by a false membrane in the cavity or its immediate vicinity, and thus the existence of fluid be masked. It is often impossible to determine the reason why a fluid, the presence of which has been established by physical examination, fails to be evacuated by the aspirator. For the purpose of determining whether the needle is in the cavity of the chest or has become entangled in the tissues, Dr. Richardson has employed a slender sound with a milled head and an elastic curved point. This sound is so tempered that it can be easily passed through the straight canal of the aspirating needle, but as its point emerges in the cavity of the chest, the original curved direction of the end is resumed, so that it reaches farther than the point of the needle, and tends to extend toward one side. If the needle be within a cavity containing fluid, the curved extremity of the sound may now be rotated freely within the cavity by means of its milled head. If, however, the needle has penetrated some solid organ, or has become caught in a mass of false membranes or adhesions, or has lodged in a septum or partition in the cavity, the sound cannot be projected beyond the end of the needle, or if this should occur the sound cannot be rotated, as the curved extremity cannot make its normal excursion in a solid or confining medium. The utility of this instrument is not confined to the thorax, but it may be employed to determine the nature and density of effusions or tumors of the abdominal cavity and other parts of the body.

DR. MINOT said that the case reported by Dr. Richardson was one of the most successful he had ever seen in the rapid and complete subsidence of the effusion. The difficulty which was experienced in reaching the fluid is a complication which those who see many cases of pleuritic effusion are familiar with, and which, while it causes some delay and disappointment, is not now regarded as of serious importance. Indeed, the chest is often tapped without reaching the fluid. In these cases ether is of great service, as it allows the operator to make repeated punctures until the fluid is reached. In no small number of cases where no fluid is obtained the failure is due to fright and anxiety of the patient after the first puncture. In the establishment of diagnosis there is no entirely reliable method which does not include the puncture of the chest wall. The objective symptoms of a purulent effusion in the thorax are dullness, absence of respiration, fever, emaciation, absence of physical indications of disease of the lung, but progressive signs of advancing serious disease. There is usually but little difficulty in evacuating the fluid through a small canula, though larger canulæ may be employed with equal ease and safety. In the present case three separate and distinct deposits of purulent fluid were liberated, and the regeneration of the strength and the rapidity of healing were quite remarkable. The surroundings of the patient may have had something to do with the process of recovery, as the residence was in the top of the Hotel Bellevue, the nearest point to the sky in Boston which is inhabited by man, where the patient may be supposed to have enjoyed a constant supply of fresh air, and to have been fanned by breezes from all directions.

DR. A. T. CABOT remarked that it seemed as if there were three purulent collections, only one of which was reached by the operation, the other two opening spontaneously. The difficulty experienced in the performance of the operation was doubtless increased by the preliminary evacuation of a considerable amount of fluid, which changed the existing relation of the parts. Rapid convalescence after evacuation of pleural effusions is not very rare. In one case of effusion in the left chest the heart was found to the right of the sternum with the impulse above the nipple. On the day after the operation the heart was in its normal position, and respiration fully restored. In another case occurring in a child in which drainage was employed, the tube was removed, and the child was entirely well in two weeks. In these cases the lung at once expands and fills the cavity, and the natural condition of the parts is immediately restored. In the old method of dressing, the air enters the pleural cavity from the outside with fully as great ease as it enters the bronchus, and the lung is at liberty to remain in a contracted state. In the modern antiseptic dressing the impervious mackintosh which is closely applied to the chest occludes the passage of air into the cavity of the chest through the artificial opening, thus hastening the expansion of the lung and the restoration of the diminished respiration.

DR. KNIGHT remarked that in the case reported there was little doubt of the presence of fluid in the chest. The extremity of the tube was probably buried in the tissues. The main features of the case were absence of cough, a sense of great resistance in percussion which is observed only in cases of fluid effusion in the chest or of a tumor within the thorax. In such a case we puncture repeatedly until we find fluid.

DR. J. COLLINS WARREN said that in operating upon the chest he employs a method which is at once easy, simple, safe, and efficacious. He first incises the skin in the ordinary way, and then feeling for the desired space between the ribs he thrusts a pair of closed scissors through the intervening tissue into the cavity of the chest. By separating the scissors and withdrawing them in this position a sufficient exit is afforded for the contained fluid, and drainage tubes or other necessary instruments may be readily passed into the chest. There is no hæmorrhage, and there are no vessels to look after. This method presents many advantages over that of dissecting a passage through the tissues.

DR. MINOT observed that there is no doubt that antiseptic dressings are of great advantage in this as in other surgical procedures, and no case could show this benefit more clearly than the present one, but at the same time we cannot deny that many cases do exceedingly well without antiseptic precautions, and sometimes lead us to ask ourselves if the claims of antiseptic dressings are not too great. He mentioned a case in which he had operated upon an adult. The odor of the effusion was horrible and filled the whole house, yet in three weeks the patient was entirely well. The method advocated by Dr. Warren is an ad-

[1] See page 555 of this number of the JOURNAL.

mirable one, and Dr. Minot has employed it with perfect success. Still another way in which the operation may be readily performed is by thrusting into the chest a large canula, through which the drainage tube may be passed into the cavity of the thorax. In this last method the wound of the external skin is apt to close, and for that reason it is better to make an incision through the skin. As an illustration of repeated attempts to discover the location of fluid, Dr. Minot mentioned a case in which five punctures were made in the chest of a child, who did perfectly well and recovered easily and rapidly.

DR. KNIGHT asked if there was full expansion of the lung in the case mentioned by Dr. Minot.

DR. MINOT replied that there was not complete expansion.

DR. KNIGHT asked the result of puncture or operation in cases of chronic disease of the lungs.

DR. CABOT answered that they usually are not benefited by free incision.

DR. KNIGHT asked if it were desirable to use antiseptics in cases of phthisis subjected to operation?

DR. CABOT replied that it was not.

DR. RICHARDSON stated that he had operated on a case in which there was crepitus at the apex. After operation the lung expanded as far as the fourth rib, but never any farther, so that a considerable cavity remained. The patient died of supposed phthisis. In this case antiseptics were continued for four weeks, and at the end of that time were replaced by oakum.

DR. SOULE, of Winthrop, asked if the benefit of antiseptic dressings was derived from the exclusion of septic organisms or from some curative action of the antiseptic.

DR. SHATTUCK asked if the method which was adopted by Dr. Richardson could properly be called antiseptic treatment?

DR. RICHARDSON said that it was entirely antiseptic.

DR. PRINCE asked the nature of the friable mass spoken of by Dr. Richardson in the account of the operation, and which he said "broke down before the finger"?

DR. RICHARDSON replied that he now supposed it to have been a fibrinous mass of exudation, but that at the time of operation he thought it to be the lung softened by disease.

DR. MINOT remarked that much credit must be given to the strong constitution of the patient; for without this important provision recovery would probably never have taken place. The child endured a great deal of suffering, both before and after the operation, and it is quite remarkable how much the puerile system will endure without lasting detriment to the health or strength. In an experience of many cases of empyema with phthisis the result has always been unfavorable. In spite of the greatest care the dressings become septic and are rendered useless.

DR. KNIGHT said that he had once seen a remarkable recovery of a phthisical patient with pneumohydrothorax after free opening and drainage. The subject was a patient of Dr. J. G. Blake, a boy, who, when first seen, appeared in a hopeless condition. He had disease of both lungs, and it seemed useless to operate. Dr. Blake, however, felt that the boy should have the chance of benefit, and opened the chest. In a few months the patient went back to work in a store.

DR. SHATTUCK remarked that the general impression exists that such cases universally result unfavorably. Certainly in the City Hospital an unfortunate course is the rule.

DR. KNIGHT said that Professor Pepper recently told him that such cases were treated as out-patients in his clinic. Professor Pepper inserts a seton and the patients come to the hospital at intervals, and usually recover from the disease.

DR. RICHARDSON has seen three cases of purulent effusion in the thorax complicating phthisis, and they all did badly. There was constant discharge of pus and the permanence of a cavity.

DR. LYMAN said that the cure of a case of this kind by *one* operation had not yet been his fortune, but repeated operations have been necessary. In the subsequent evacuation of fluid from the same patient the liquid has generally become milky or purulent. Dr. Blake has been more fortunate, and has obtained serum from successive aspirations, but in the majority of cases the fluid becomes more or less purulent when frequent evacuation has become necessary.

(*To be continued.*)

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

THE USE OF ANTISEPTICS AFTER ABORTIONS AND LABOR.

AT a stated meeting of the Society held May 28th, DR. W. GILL WYLIE read a paper on the above subject. While an interne of Bellevue Hospital in the years 1870 and 1871, he said, he had an opportunity of studying septicæmia in a number of surgical and a few puerperal cases, and under the teachings of the late Prof. James R. Wood had become a believer in carbolic acid. In 1872, while in Edinburgh, he became acquainted with the antiseptic methods of Mr. Lister, and on his return to this country brought with him the appliances for carrying them out in his practice. In his own private practice he had never met with a single case of puerperal septicæmia, and he thought that this immunity from such trouble was to be attributed in part, at least, to the precautions which he adopted in every case of labor which he attended. They were as follows: —

(1.) He made a local examination some weeks before the time for confinement, and if there were any evidence of disease about the parts directed the use of a warm vaginal douche containing a weak solution of carbolic acid. He had a trained nurse on hand, and as soon as labor commenced a similar douche was employed.

(2.) All useless articles were removed from the chamber, the furniture of which should be as simple as possible, and sponges, towels, and any implements required about the patient were disinfected with a solution of carbolic acid of the strength of one part to twenty. The hands of the accoucheur and nurse were treated in the same way.

(3.) The carbolic spray was started and kept up all through labor.

(4.) After labor the parts were washed with carbolized water, and vaginal douches of the same were kept up for six or eight days.

(5.) No odor of lochial discharge, such as often characterizes the lying-in chamber, was permitted to be present.

In abortions, he said, he endeavored to carry out the same general plan of antisepsis, and he then related a case which had come under his care. The patient had had a laceration of the cervix uteri, which was operated on by a professor of gynæcology, and upon this had ensued an endocervicitis and metritis. In the meanwhile she had become pregnant; but the condition was not recognized by the physician in charge, who introduced a sponge tent into the cervix. She then came to New York, and it soon afterward becoming evident that an abortion was in progress, the os was dilated and the contents of the uterus removed with considerable difficulty. Septicæmia followed, and the temperature quickly ran up to 103.5° F. As soon as this was ascertained, the cavity of the uterus was washed out with a solution of carbolic acid of the strength of one to forty by means of a gum-elastic catheter attached to a Davidson's syringe, and the injection was ordered to be repeated every three hours. The temperature was quickly reduced to normal, and after a time the injections were discontinued. The patient then had a chill, which was followed by a rise of temperature. It was again reduced by means of the injections, and after this it was found that if the patient were allowed to go more than eight hours without an injection she invariably had a chill; the temperature at one time rising as high as 104.5° F. The injections were then kept up regularly every three hours both day and night for seven consecutive days; and after that the patient had no further trouble.

Since then, Dr. Wylie continued, he had been able to manage such cases with less trouble, and one of the conclusions that he had arrived at in connection with it was, that once in three hours was not often enough to repeat the intra-uterine injection. In the second case that he related the temperature rose as high as 105° F. An injection of carbolized water of the strength of one to forty was then given every half hour, and in three hours the temperature had fallen to 102° F. By the next morning the temperature was normal, although no internal medication whatever had been used, and a close watch was kept upon the patient until all danger was over. In this case the catheter employed for making the injections was left continuously in the uterus. Two other similar cases were also mentioned.

From his experience he had come to the conclusion that the accoucheur ought to consider the uterus after an abortion in the same light that the surgeon does a punctured wound, and he asked attention to the following points: —

(1.) Septic matter must be removed and antiseptics employed to prevent the further generation of such material.

(2.) Perfect drainage is essential.

(3.) When septicæmia occurs almost all cases can be saved by washing out the uterus frequently with a carbolized solution of the strength of one to forty, or one to twenty, if necessary, if the injections are commenced within ten or twelve hours after the onset of the trouble.

(4.) General medication, except so far as it keeps up the strength, is of little value. In all probability enough carbolic acid is absorbed from the injections to put a stop to further generation of septic matter.

After the disease had gone on unchecked for a certain period he thought that no treatment, whether local or general, could save the patient. Most of the hopeless cases, however, began as simple ones, and if the proper treatment had been commenced early enough in them, they would not have proved so serious. The beginning of the trouble, he believed, was almost always local. What was needed was the employment of frequent and long-continued douches. When it was mentioned that the injections were used every half hour in the case related, it was meant that each one was commenced half an hour after the end of the preceding one. The douche should be kept up for from fifteen to twenty minutes, and sometimes longer. If the trouble was confined to the vagina, it was only necessary to wash out that part; but if it had continued for any length of time this was rarely the case, and it was requisite to wash out both the uterus and vagina. It was better to employ the douche at frequent intervals than to pursue the plan of constant irrigation, as it afforded opportunity to the patient to rest, and also permitted the use of stronger injections than it was advisable to make by that method. Even pure water, however, would no doubt be of considerable service in reducing the strength of the poison. It was recommended to commence with a solution of carbolic acid of the strength of one to twenty and afterwards reduce it to one to forty. If the temperature should continue high, or begin to rise again, however, the stronger solution was to be resumed. Bichloride of mercury was considered by some authorities to be the best antiseptic; but he had not employed it. The first injections usually brought away some blood and a considerable quantity of débris; but those made afterward were clear. It was of extreme importance in these cases that the carbolic acid used should be a pure article.

As he had before remarked, he had not met with any cases of septicæmia following labor at full term in his private practice; but he had seen four cases in consultation. Three of these had terminated fatally; the patients all being in the last stages of the disease when he was called in. In the fourth case labor was followed by cystitis and subinvolution, and three weeks after the birth of the child a chill occurred. The temperature then rose to 104.8° F., and there was profuse diaphoresis and the collapsed appearance characteristic of septicæmia, while the uterus, which was in a state of anteflexion, remained large and soft. The lochia had completely stopped. Intra-uterine injections of carbolized water, one to thirty, were at once commenced and repeated regularly every half hour. At the end of eleven hours the temperature had become reduced to normal, and the patient then made a good recovery.

In his service at Bellevue Hospital, a patient thirty-eight years of age was admitted October 19, 1882, suffering from puerperal septicæmia. She was a large and fleshy woman, a multipara, and was accustomed to getting up and doing housework three or four days after the birth of her children. Four days before her admission to the hospital she had been confined, and the day previously she had had a chill. When she was brought in, in the evening, the temperature was 101° F., and by morning it had risen to 104° F., and nausea and vomiting had set in. At eight A. M. a gum-elastic catheter was introduced into the uterus and two quarts of carbolized water, of the strength of one to forty, were employed to wash it out. The injections were repeated every half hour, and when the temperature became normal, every four hours, and there was no further trouble.

He also mentioned nine other cases which occurred at Bellevue, but not under his own care. Among

these there were two deaths; one of the patients being in the last stage when admitted, while in the other the intra-uterine injections were delayed until too late a period.

In regard to the dangers of intra-uterine injections, he said that he had seen severe shock result in a case in which an operation for laceration of the cervix had been performed. The catheter had been allowed to enter the Fallopian tube, and the carbolized fluid thus gained admission to the abdominal cavity. In this case recovery was long and tedious.

In one case of puerperal septicæmia which he was asked to see at Bellevue Hospital, the patient was rapidly growing worse at the time. The house-surgeon reported that he had resorted to the use of the carbolized douche, but as this was followed by slight convulsions, he hesitated to go on with the treatment. As the patient's condition was becoming more and more serious, however, he advised that the intra-uterine injections should be resumed, notwithstanding the result noted as attending them. They were now continued every half hour, and the patient at once began to improve, finally making a good recovery. During the progress of the case the woman had at one time well-marked hysterical symptoms, and the nature of the convulsive seizures following the first douche were then, of course, satisfactorily explained. He thought that if a large tube, like that of Dr. Chamberlain, were used for making injections, it might perhaps do injury by forcing fluid through the Fallopian tubes, and on this account he preferred to employ a small catheter. The ones that he was accustomed to use were marked with a graduated scale, so that it could be known exactly how much of the tube was in the uterus. The catheter, as before remarked, could be left in the uterus between the injections, attached to a rubber tube; and it was thus of service in keeping up drainage as well as carrying the antiseptic fluid into the uterus. If the organ were anteflexed, it was sometimes necessary to use a stilette in order to introduce the catheter into the uterus.

The objects of the paper, he said in conclusion, were, first, to inculcate the use of antiseptics after labor and abortion in the same manner in which they were employed by general surgeons in punctured and other dangerous wounds; and, secondly, to advise the more frequent and long-continued use of antiseptic injections than are now commonly practiced. The text-books in speaking of intra-uterine injections took up most of their space in calling attention to the dangers attendant upon this procedure, and stated that in cases where they are advisable they should not be repeated oftener than every three or four hours.

Dr. P. F. Mundé remarked that for several years he had had very positive convictions on this subject, which were in accord, in the main, with the ideas expressed in the paper. He thought that whenever there was an offensive discharge after parturition, and this did not come from decomposing substances in the uterine cavity or vagina, the antiseptic douche should be used. As soon as Dr. Chamberlain published an account of his intra-uterine tube, about the year 1875, he became impressed with its immense value, and ever since then in his private practice whenever the temperature of a puerperal patient rose above 102° F., he had at once resorted to its use. As a rule, however, he had found it sufficient to employ the intra-uterine injections only three or four times a day. In no case that got well had he ever seen anything but the best results from the employment of Chamberlain's tube. He had, however, seen cases in which the temperature ran up and never came down again, notwithstanding the persistent use of the antiseptic douche; but he believed that such a result was due to the fact that the injections were commenced at too late a period in the course of the disease. Whenever, therefore, there was a rise of temperature due to septic endometritis (the poison being taken up into the blood), antiseptic injections should be commenced and repeated as often as required until the temperature was permanently reduced. He scarcely hesitated to say that this was the only proper local treatment to be adopted. But in some cases there came a time when such injections were no longer of service, and might, indeed, become positively injurious. He had seen instances in which a little rise of temperature, instead of a fall, occurred after each injection, and in which the injections were also followed by considerable pain, especially at the fundus uteri. In such cases they were doing injury to the patient by their traumatic influence, and it became the duty of the accoucheur to discontinue their use. He thought that in any case in which the temperature was not reduced by their employment in from twenty-four to forty-eight hours (according to circumstances) it was better to stop them, as their further employment was only injurious. In two cases he had seen in which the douche was followed by no benefit, the free use of quinine and salicylate of soda had been attended with excellent results, and the patients made good recoveries.

He believed that the keeping up of the injections for too long a period might perhaps lay open the uterus to further infection, although this might possibly be avoided by the use of constant irrigation. This practice had been given a fair trial in the hospitals of Germany, however, and it had not proved a success. He did not see much difference between the latter and Dr. Wiley's plan of repeating the injections every half hour.

In conclusion, he said that if there were no offensive discharge he could not see how washing out the uterus could be of service. In regard to the use of Chamberlain's tube he said it was true that it was a stiff instrument, and it might possibly do harm; but he did not believe that this was at all likely.

ASSOCIATION OF AMERICAN MEDICAL EDITORS, HELD AT CLEVELAND, JUNE 5, 1883.

The annual meeting of the Association of American Medical Editors was held in the evening in Case Hall. It had been proposed to hold two sessions, but it was decided to transact all the business in one evening, and not hold another session. The following members of the Association were present, beside a large body of physicians: Dr. N. S. Davis, of Chicago, the President of the Association; Dr. A. N. Bell, of the *Sanitarian*, New York; Dr. W. C. Glasgow, of the *St. Louis Courier of Medicine*; Dr. John V. Shoemaker, of the *Medical Bulletin*, Philadelphia; Dr. C. H. Hughes, of the *Alienist and Neurologist*, St. Louis; Dr. C. B. Stemen, of the *Journal of Medical Sciences*, Fort Wayne; Dr. A. Palmer, of the *Physician and Surgeon*, Ann Arbor, Mich.; Dr. Henry O. Marcy, of *Annals of Anatomy and Surgery*, Boston; Dr. F. Woodbury,

of the *Medical Times*, Philadelphia; Dr. Thomas Gallagher, of the *Pittsburg Medical Journal*; Dr. L. S. McMurtry, Louisville, Ky., *Medical News*; Dr. H. H. Mudd, of the *St. Louis Weekly Medical Review*; Dr. L. Connor, of the *Detroit Lancet*; Dr. W. Carpenter, of the *Medical Record*, New York; Dr. W. C. Wile, of the *New England Medical Monthly*; Dr. William Brodie, of the *Therapeutic Gazette*; Dr. Deering Roberts, of the *Southern Practitioner*. The meeting was called to order by DR. N. S. DAVIS, of Chicago, the President, and the minutes of the last annual meeting were read by DR. J. V. SHOEMAKER, of Philadelphia, the Secretary.

THE ANNUAL ELECTION OF OFFICERS

was then held, and the following elected for the coming year: President, Dr. L. Connor, of Detroit; Vice-President, Dr. Thomas Gallagher, of Pittsburg; Secretary, Dr. J. V. Shoemaker, of Philadelphia.

An interesting address on

THE PRESENT STATUS AND TENDENCIES OF THE MEDICAL PROFESSION AND MEDICAL JOURNALISM

was delivered by DR. N. S. DAVIS. This was followed by a valuable address on

JOURNALISM DEVOTED TO THE PROTECTION AND CONCENTRATION OF MEDICAL AND SURGICAL SCIENCE IN SPECIAL DEPARTMENTS,

by DR. HENRY MARCY, of Boston.

DR. DEERING ROBERTS moved that this Association recommend as editor of the journal to be founded by the American Medical Association Dr. N. S. Davis, of Chicago, the father of the American Association. This was unanimously adopted, and on motion of Dr. J. V. Shoemaker it was decided to inform the Board of Trustees appointed to select an editor of this action.

The Editors' Association then adjourned until the next meeting, which will be held in Washington in 1884.

REPORT OF THE THIRTY-FOURTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT CLEVELAND, OHIO, JUNE 5, 6, 7, AND 8, 1883.

PROCEEDINGS IN GENERAL SESSION.

FIRST DAY, JUNE 5TH.

THE Association was called to order at 10.30 A. M., in Case Hall, with the President, DR. JOHN L. ATLEE, of Pennsylvania, in the chair, and with DR. WILLIAM B. ATKINSON, the Permanent Secretary, at his post; about six hundred registered members and delegates were present.

Promptly at 10.30 o'clock DR. X. C. SCOTT, as chairman of the Committee of Arrangements, arose and said that the time had now arrived for the opening of the thirty-fourth annual session of the American Medical Association, and he took pleasure in introducing RIGHT REV. RICHARD GILMOUR, Bishop of Cleveland, who would offer the introductory prayer. In a few brief remarks the bishop formally opened the meeting. An extempore prayer was then made, concluding with the Lord's prayer. Dr. Scott then introduced DR. JOHN L. ATLEE, M. D., of Pennsylvania, President of the Association, as one of the noblest ornaments of the profession. The President stepped forward and introduced GEN. EDWARD S. MEYER, who delivered

A FORMAL ADDRESS OF WELCOME.

At the conclusion of the address, PRESIDENT ATLEE invited the vice-presidents and ex-presidents to the stage, and the gentlemen took their seats.

The announcement of the programme for the entire session was made by DR. SCOTT, the different apartments of medicine and their places of meeting assigned. Receptions were also announced, and the names of the gentlemen receiving.

Dr. Scott called attention to the beauties of the Forest City, its monuments, its lake, its cemeteries, the last resting-place of the noble Garfield, its asylums, and churches. An invitation from the Jewish Orphan Asylum was extended. A photographer also extended an invitation requesting the assembly to permit him an opportunity of photographing them in a body, as was done in the London Congress.

PROTESTS AGAINST THE REQUIRED PLEDGE.

Dr. Scott called attention to the fact that each delegate and permanent member on registering his name was required to fill up a blank bearing the following on its face: "In acknowledgment of having adopted the Constitution, By-Laws, and Code of Ethics of this body, and of my willingness to abide by them, and to use my endeavors to carry into effect the objects of this Association, I hereunto affix my name,"[1] and said that he had received a number of protests against this action. These protests were referred to the Judicial Council.

DR. JOHN L. ATLEE then delivered

THE ANNUAL PRESIDENTIAL ADDRESS,

in which he said: I have thought it well to bring prominently forward, in my address to-day, my own rare specialty, namely, the having been a graduate of sixty-three years' standing. Instead, therefore, of calling your attention to the more strictly scientific subjects that are so generally considered upon such an occasion as this, it has occurred to me that some reminiscences of my early medical life might not be wholly unacceptable or devoid of interest and instruction.

When I began my medical studies, in 1815, there were but few medical colleges in the country, — the medical department of the University of Pennsylvania, the College of Physicians and Surgeons of New York, and the colleges at Baltimore, Harvard, New Haven, and Lexington, Ky. The University of Pennsylvania was the leading institution, to which students from all parts of the country came. The facilities for clinical instruction at the university were confined to the Pennsylvania Hospital and the Philadelphia Almshouse; but of these lectures and the distinguished clinical teachers I shall speak again.

Having had no opportunities for studying practical anatomy before matriculation at the University of Pennsylvania, I devoted myself more particularly to that branch in my first course of lectures, 1817–1818. The chair was then filled by Dr. Caspar Wistar, one of the most able and accomplished teachers of anatomy which this country has produced. His amiable deportment and kind treatment of students made an impression upon me which I shall never forget, and after the lapse of more than sixty-five years the

[1] Extract, vol. xxxiii., p. 623.

thought of him kindles in my breast emotions of genuine pleasure. As I remember him, he was of medium stature, apparently about sixty years of age, and so impressive was his teaching of anatomy up to the time of his death, which occurred very suddenly in January, 1818, that his words remain with me yet.

Just here I may appropriately allude to the foundation of a social institution, long known in Philadelphia as "Wistar parties." Dr. Wistar had been in the habit of inviting to his house, on Saturday evening, men of learning and distinction, both citizens and strangers. The ability and social qualities of the professors of the University of Philadelphia, and of the eminent medical men of Philadelphia, caused always the presence of a large infusion of medical science in the composition of his parties. After his death these gatherings were revived and continued by his friends, and they were still known as "Wistar parties," in honor of their founder.

Dr. Nathaniel Chapman, at this time, and for many years afterward, filled the chair of the institutes and practice of medicine. He was a most eloquent and impressive lecturer, and the idol and tried friend and benefactor of the student. He was, moreover, a man of very marked ability, eloquence, and great social qualities. The physiology of that day was very different from that of the present. The microscope had then hardly begun to be applied to the study of anatomy, and so little did Dr. Chapman appreciate it, that it was a standing joke with him to quote old Leuwenhoeck as having discovered with his microscope "twenty thousand devils playing upon the point of a needle." Professor Chapman was a man of very imposing presence, rather above the medium height, always neat in his dress, perfectly well-bred, and always obliging and polite to the students. I believe that he did more for the advancement of medicine in his day than any other person with whom I was acquainted. He established a school, called Chapman's Institute, for the benefit of his private students, of whom he always had thirty or forty, and other students who chose to attend. The building was in the rear of his house, with a private entrance, and he employed as teachers of his classes, gentlemen who afterwards became eminent professors at the university and at the Jefferson Medical College, among whom may be mentioned Prof. William P. Dewees, Hugh L. Hodge, and John K. Mitchell.

Last but not least among the Faculty of that day was Dr. Philip Syng Physick, the great American surgeon, who that winter, 1817–1818, delivered his last course of lectures on surgery. A pupil of John Hunter, he taught the doctrines of that great man. As I recall his course of lectures it seems to me that he was one of the most impressive teachers that I have ever listened to. Dr. Physick was remarkable for great attention to details, and in his operations upon the cadaver he carefully observed all the rules for operating upon the living body. He also recapitulated the lecture of the preceding day before going on with his subject, by questioning the students who occupied the first two rows of seats in the amphitheatre. I may refer to one incident which may illustrate his method and his carefulness: On one occasion he stumped the whole class; he had been lecturing on lithotomy the preceding day, and he put the question to the first student, "What instruments should be provided for the operation?" The answer appeared to have been correctly given, but he was not satisfied. The question was repeated to the next student, and finally to the whole class with the same result. Dr. Physick then said, it was "a pin, gentlemen, a pin," that was needed to complete the list. This showed his precision, and impressed upon us the necessity of taking care never to go to an operation without the minutest preparation.

Dr. Physick was a man of medium height, with very regular features. His face at that time was pale, as if he suffered from delicate health. He was of very abstemious habits. I remember on one occasion, at a party given at his house, when the servant brought in a tray with wine, I was standing beside Dr. Chapman, when I placed my hand upon a decanter, as I supposed, of wine; Dr. Chapman touched my elbow and told me not to take that; I filled the glass from another bottle, and afterward asked the doctor why he had checked me; he said the first was simply colored water that Dr. Physick had provided for his own use.

In speaking of Dr. Physick's teaching I should also say that he always lectured extemporaneously, the didactic lectures on inflammation being read by Dr. Dorsey, his nephew. Dr. Physick was dignified in his deportment, and eminently grave; we rarely saw a smile upon his face. His usual dress in the lecture room was a blue coat with metal buttons, white vest, and drab pantaloons. He was remarkably staid and reserved in his manner, and was always regarded with reverence and great respect by the students. He never indulged in any flight of imagination, and was purely a practical lecturer who brought his knowledge from the stores of his large personal experience.

One of his favorite precepts was to insist upon great attention to diet after surgical operations. I may mention this anecdote. In one of his lectures he spoke of a very important surgical operation, and said that there was a necessity for attention to absolute diet. The next day in recapitulating he asked a student what was meant by absolute diet. The student said "toast or barley water." Will any gentleman tell me what is meant by absolute diet? appealing to the whole class. There was no reply. "Water, gentlemen, water." A precept I have never forgotten, and which I think is not sufficiently observed at the present day after important surgical operations.

The clinical teaching of that day was not given at the Medical College, as it now is, but at the Pennsylvania Hospital, and the Philadelphia Almshouse, then in the city; each institution affording an excellent school of instruction to the students. As the clinical hours were the same at both institutions, I chose the almshouse as affording a larger field.

Among the clinical teachers of that day very few were superior to Dr. Joseph Parrish, who had been a pupil of Dr. Wistar. He was a man of most amiable character, thoroughly devoted to the advancement of the profession, having large classes of private students every year, to whom he lectured, and for whom he also provided able assistants to aid in teaching. One of these was the late Dr. George B. Wood. Dr. Parrish was a man of warm sympathies, and he testified to his benevolence in the manner in which he conducted his clinics. Let me give you an illustration: A poor, weather-beaten sailor was brought to the almshouse suffering very much from rheumatism. Dr. Parrish ordered the man to be clothed in flannel and have a bottle of porter daily. On the next clinical day Dr. Parrish, on inquiring, found that neither had been attended to. He repeated the order, with a mild rebuke to the

steward. At the next visit, three days afterward, finding that his previous orders had been disobeyed, he called for the steward and remained at the bedside of the patient until the order was fulfilled.

With regard to the treatment of that day I shall say little; the text-books then studied fairly present it to you. Would that I could speak more satisfactorily of the treatment of the insane as I remember it. They were generally confined in the basement of the almshouse in small cells, some with manacles, others with chains; seldom had they access to fresh air, and often they had nothing but loose straw for their bedding. This unhappy and inhuman state of things continued until Pinel and Esquirol established a course of treatment more consistent with the dictates of science and humanity. In a recent visit to the State Lunatic Hospital at Harrisburg, Pennsylvania, of which I am a trustee, not one of the four hundred insane inmates was subject of mechanical restraint.

At that time the resident physicians at the almshouse were not graduates in medicine, but last-course students, who fulfilled their duties while preparing for graduation. The requirements for graduation were attendance upon two full courses of lectures of four months each, a written thesis on some medical subject, attendance at the hospital or almshouse, and an oral examination in the presence of the whole Faculty.

Many of the elderly gentlemen present to-day must have heard of the much-dreaded "green-box." During the time of Drs. Rush and Barton it was reported that favoritism was shown to their respective students, and the same was said of the students of Drs. Chapman and Dorsey. To obviate this, or the appearance of it, a large green screen was placed across one corner of the room, having a door behind it, through which the candidate entered, and here underwent his examination unknown to any one but the dean of the Faculty. This mode of examination was adhered to until after the death of Dr. Dorsey, when it was optional with the student to go into the green-box or present himself openly before the Faculty. Some ten or twelve candidates had such a terror of the green-box that they went to New York, where they obtained the degree of M. D. by undergoing an examination and paying the graduating fee.

It was the time of calomel and the lancet. With regard to the one I need not speak; but of the latter I feel well assured that the almost total disuse into which it has fallen has cost many valuable lives. From a very large experience in its use I am satisfied — fully satisfied — that if we depended more on the early use of the lancet in the congestive and inflammatory states of many diseases our practice would be more successful than it now is. At the present time there is too exclusive reliance upon medicines affecting the nervous and vascular systems, which act with less efficiency and are less prompt. It is, in my opinion, a very important subject, and I feel assured that ere long the lancet will be more freely used than it is now. In the congestive chills preceding inflammatory diseases, and in the old stage of intermittents, I have frequently broken up the paroxysm and relieved the patient by the lancet alone.

In the class of 1817–1818 there were many men who afterward became distinguished in their respective departments. Time will not permit me to enumerate them all.

Among the first was one with whom I was very intimate, Dr. George McClellan. A man of great natural talent, quick perception, and wonderful memory, prompt to decide and prompt to act, he made himself during his pupillage one of the best anatomists in the country, and subsequently brought more talent into surgery than any man I have ever met with. During his brief but brilliant career he performed more surgical operations than any other surgeon in Philadelphia; and he undertook to perform, and did perform successfully, some operations which were considered impracticable by other surgeons. Among these was the removal of the parotid gland. It was my good fortune to visit with him his first patient the day after the operation, and although it was afterward reported that it was not the parotid gland, I made a very careful examination of the tumor, and of the patient, and was perfectly satisfied of its identity. This operation he performed several times afterward, one of them on a young Irishman, where Dr. Dease, an eminent surgeon of Dublin, had previously failed.

A beautiful illustration of his diagnostic ability was shown to me when on a visit to Philadelphia: a female infant, about four or five months old, whose parents belonged to one of the most distinguished families in New York, was brought by her father to Philadelphia, to consult the oldest leading surgeons, of the city, who all pronounced the case hopeless. The child had from birth a complete paralysis of the right arm and hand. As Dr. McClellan at that time was beginning to acquire popularity as a surgeon the father was persuaded to consult him. Dr. McClellan made a careful examination, and found that the clavicle was pressing on the brachial plexus of nerves as it passes over the first rib, and that the paralysis was owing to this cause. All that he did was to elevate the shoulder and the clavicle by mechanical means, and the functions of the arm were entirely restored. I saw it playing equally well with either arm on its nurse's lap.

Dr. McClellan was of medium size, fair complexion, and with blue eyes; he was very attractive and agreeable in his manners, very vivacious, and was called "a bundle of nerves." He was very fond of society, and a general favorite wherever he was known. There was no jealousy in his disposition, and I may be permitted to add that he was the only surgeon in Philadelphia who congratulated me upon the success of my first operation for ovariotomy in 1843; when I revived the operation, which, after its introduction by Ephraim McDowell, had fallen into disuse, he sought me at my hotel when on a visit to the city, and gave me a most cordial embrace. . . .

With the garrulity, and may I not call it the privilege, of your oldest brother, I present you with some of the reminiscences of my college life. Before I close this address, let me briefly call your attention to some other subjects, which, in my opinion, are of pressing importance. Let me impress upon the mind of every member of the profession the necessity of strict and undivided attention to the duties of his high calling.

Above all things ever strive to maintain the honor and dignity of the profession. Let no selfish or mercenary consideration deter you from observing the laws laid down in our noble Code of Medical Ethics. Cultivate friendly relations with your local medical brethren, more particularly the younger; and regulate your intercourse with all men in such a way as to cast no stain upon the honor of the profession, which is in your keeping.

In my day, previous to the establishment of medical societies throughout the country, and the organization of the American Medical Association, and the general adoption of the Code of Ethics, I saw many disastrous effects from the want of brotherly consideration and kindness. The medical men of that day were often in difficulties; patients would be taken from one physician to another without ceremony, and so great was the jealousy existing between them, that for more than twenty years after my graduation it was impossible to form a medical society in my native city and county, because there were so many aspirants for the honors. Here let me speak of some of the difficulties I had to encounter in my early professional life. Instead of being taken by the hand by the older physicians, every obstacle was thrown in my path — consultations were refused, and the treatment of my patients unfavorably criticised.

By the establishment of medical societies and the adoption of the Code of Ethics a wonderful change has been effected. We now feel it our duty to sustain our younger brethren, to treat them with courtesy and kindness, to save them from their errors, and encourage them in all their good work. Had the adoption of the Code of Ethics no other result than this, it would have been an invaluable blessing to the profession. But it has accomplished more. It has put the seal of condemnation upon all "isms," and developed an *esprit de corps* that has enlarged the boundaries of our science, and greatly increased the usefulness and social standing of the profession.

One word more and I have done, and I say it chiefly as a word of encouragement to the younger among you. At the close of a long life, devoted unreservedly to the study and practice of medicine, I will say that, notwithstanding its uncertainties, its fatigues, its anxieties, its bitter disappointments, I am completely satisfied that in no other career can a man more fully accomplish his whole duty to God and to his fellow-men; so that when life here is ended it can be truly said of him as — be it said with all reverence — was said of Him whom we all should imitate, *pertransivit benefaciendo* — He went about doing good. Trusting that our proceedings may be both harmonious and profitable to us all, and, thanking you again for the honor you have conferred upon me, I sincerely hope that the recollections we shall carry home with us will be both agreeable and lasting.

The Association then adjourned.

SECOND DAY, JUNE 6TH.

The second morning session of the Association convened in Case Hall at 9.30 o'clock, with one thousand registered members.

NATIONAL MEDICAL MUSEUM AND LIBRARY.

Dr. S. D. Gross offered a paper signed by Austin Flint, Oliver Wendell Holmes, and himself, recommending an appropriation for the National Medical Museum and Medical Library, and the providing of means whereby this valuable collection shall be preserved from danger of fire. Resolutions embodying these views were adopted.

JOURNALIZING THE TRANSACTIONS.

Dr. N. S. Davis then introduced a series of resolutions passed at the last meeting in favor of journalizing the Transactions. The trustees decided that it could be accomplished without involving the Association financially. Their idea was to publish a weekly at Chicago called the *Journal of the American Medical Association*, have an editor, who was to employ an assistant, and have a corps of correspondents in all the medical centres of the country, and a few of those in Europe; that no advertisements of patent medicine be admitted, and no professional cards, or other professional advertisement, except under the strictest rulings of the Code of Ethics. He moved the adoption of a resolution to begin the publication of a weekly journal, to be called the *Journal of the American Medical Association*, to take the place of the published Transactions of the Society hereafter. The resolution was adopted, and Dr. N. S. Davis was announced as editor-in-chief of the new periodical.

THE VISITING PHYSICIANS

from Canada were invited to a seat upon the platform.

ADDRESS IN PRACTICAL MEDICINE.

Dr. J. A. Hollister, of Illinois, chairman of the Section of Practical Medicine, was then introduced. His address was practically on the progress made last year in Medicine, Physiology, and Materia Medica.

In medicine they had to congratulate themselves on the advance made by individual efforts. Medical journalism claims comparison with any previous year. The advances in microscopy during the past year have been wonderful. In this science the composition of the blood is commanding much attention, more particularly in relation to corpuscles. The speaker then referred to the diseases propagated by bacteria. Nothing to command special attention occurred in the department of materia medica. In Italy a law has been passed prohibiting the sale of patent medicines unless the exact composition is printed upon each bottle.

The address of Dr. J. K. Bartlett, of Milwaukee, the chairman of the Section of Obstetrics and Diseases of Women, was then read. The essayist recounted the many

ADVANCES IN OBSTETRICAL AND GYNÆCOLOGICAL OPERATIONS.

Allusion was made to the value of electricity as a process of destroying the fœtus in the occasional cases of extra-uterine pregnancy, an anomaly which can only result in the death of the mother unless an operation is performed. The transfusion of blood, milk, and other solutions in the case of post-partum hæmorrhages was discussed. The too frequent use of forceps was deprecated, and the conclusion arrived at that their use had been of far more injury than benefit to society.

ADDRESS IN OBSTETRICS.

Dr. J. K. Bartlett, of Wisconsin, chairman of the Section in Obstetrics and Diseases of Women, discussed Emmett's, Battey's, and Tait's operations. The treatment of extra-uterine pregnancy by electricity has robbed that condition of its terrors. He discussed the use of ergot in labor. He regards it as a valuable resource in cases where the second stage was retarded by insufficient contraction and no pelvic obstacles existed. The opposition to the use of anæsthetics in labor appeared explicable only on the ground of improper use. Anæsthetic effects may be divided into three stages: (1) a lessening of sensibility to pain; (2) by increased dose the abolition of intelligence; (3) the abolition of mobility. In labor it is rarely necessary to produce more than the first effect.

DR. TONER, of Washington, presented the

REPORT ON NECROLOGY,

which was referred to the Committee on Publication.

THIRD DAY, JUNE 7TH.

The third morning session convened at 9.30 A. M. in Case Hall. The exercises of the morning were opened by regular morning prayer, and a collect appropriate to the occasion was offered by the REV. DR. RULISON.

The President then announced that he had made six appointments to medical and scientific societies in Europe, of those who were going abroad.

DATE OF MEETING.

DR. KELLER, of Arkansas, moved that the amendment to the Constitution relative to the date of the meeting, which had been tabled, be opened for discussion. The result was that the power of appointing the time of the meeting is left to the option of the Nominating Committee instead of limiting the dates to either the first Tuesday in May or the first Tuesday in June.

DR. FOSTER PRATT, of Michigan, presented resolutions upon the death of Dr. William Farr, of England.

SALE OF POISONS.

DR. D. H. BACHELOR, of Rhode Island, offered a resolution recommending that a committee be appointed by the President to confer with the Legislatures of the States, by petition or otherwise, for the enaction of more stringent laws in relation to the sale of toxical agents. Dr. Bachelor spoke warmly in favor of his resolution, being moved thereto by the ever-increasing number of suicides resulting from the lax laws which make the purchase of poisons easy. The resolution was unanimously adopted.

TRAINING OF NURSES.

DR. S. D. GROSS then offered a preamble and resolutions to the effect that this Association, fully recognizing the importance of the subject, respectfully recommend the establishment at every country town in our States and Territories of schools or societies for the efficient training of nurses, male and female, by lectures and practical instruction to be given by competent medical men, — members, if possible, of county societies, — either gratuitously or at such reasonable rates as shall not debar the poor from availing themselves of this benefit.

The order of the day was then called for, and DR. N. S. DAVIS, the chairman of the Standing Committee on

ATMOSPHERIC CONDITIONS AND THEIR RELATION TO THE PREVALENCE OF DISEASES,

read the annual report. He detailed a number of experiments which he had performed in determining the constituents of the atmosphere, and closed with the financial report of the committee. The resolution introduced yesterday relative to the appointment of stations of observation, which shall furnish data in regard to the effect of the atmosphere in certain localities with reference to pulmonary diseases, was referred to the Committee on Climate, together with Dr. N. S. Davis's report.

REVISION OF CODE OF ETHICS.

DR. S. POLLOCK, of St. Louis, introduced resolutions looking toward the revision of the present Code of Ethics. The resolution was laid on the table for one year, as was also that of DR. BRODIE, of Michigan, who was in favor of not permitting papers to be read in sections until the consent of the chairman of that section was obtained.

DR. W. F. PECK, of Iowa, chairman of the Section of Surgery and Anatomy, then read the

ADDRESS IN SURGERY.

He contrasted the present methods of surgical operations with those of the past. Remarking upon the improvements in surgical instruments, particularly the rachet splint. The use of the electric light in observations of the cavities of the human body, and the many valuable facts thereby obtained, were rehearsed. He laid special stress upon the necessity of careful attention to details, upon which success in surgery so largely depends.

Graham Bell's induction balance was mentioned as a valuable instrument in certain methods of diagnosis.

Cases were detailed with observations on the overlooked frequency of pathological conditions in the iliocæcal regions. He gave the history of a case in which e plorations were made in the abdomen by incision, and an obstruction of the bowels resulting from an abnormal position of the vermiform appendix, which would have eventuated in death, was remedied by an operation. He dilated upon the importance of boldly opening the abdomen in such cases before the situation of the patient becomes critical.

DR. FOSTER PRATT, of Michigan, the chairman of the section on State Medicine, read an address upon the

PROGRESS IN SANITARY ORGANIZATIONS AND THE EDUCATION OF THE PUBLIC MIND IN REGARD TO THE PUBLIC HEALTH.

The speaker described the operation of State sanitary work in his own State as a specimen of what might be done at a comparatively low expense.

Statistics show that in seven years in England the average length of life in males has been increased two full years; while in females, who suffer far more from bad sanitary arrangement, the increase has been full three and a half years. The improvement has been so marked in this short time that insurance companies have considered the advisability of regarding the progress of State sanitation as an important factor in the computation of vital statistics. At the conclusion of the address it was ordered referred to the Committee on Publication.

REPORTS OF TREASURER AND LIBRARIAN.

The report of the Treasurer, DR. RICHARD J. DUNGLISON, was then read. The balance in the treasury up to date is $903.93. The Librarian, DR. C. H. A. KLEINSCHMIDT, then reported 5713 volumes, inclusive of pamphlets, in the library of the Association. The librarian recommended that home and foreign exchanges be requested to contribute their publications, and also that $200 be placed at his disposal for the purpose of replacing the binding of books in the establishment. All reports were approved.

ELECTION OF OFFICERS.

The Committee on Nomination then reported as follows: President, Austin Flint, Sr., of New York;

Vice-Presidents, R. A. Kinlock, Charleston, S. C.; T. B. Lester, Kansas City, Mo.; A. L. Gihon, U. S. N.; S. C. Gorden, Portland, Me.; Treasurer, R. J. Dunglison, Philadelphia; Librarian, C. H. A. Kleinschmidt, Washington, D. C. The place of meeting for 1884 is Washington D. C., on the first Tuesday of May. The chairman of the Committee of Arrangements is Dr. A. Y. P. Garnett, of Washington, D. C.; Assistant Secretary, Dr. D. W. Prentiss, of the same city. Judicial Council, Drs. F. D. Cunningham, of Virginia; H. O. Marcy, Massachusetts; W. O. Baldwin, Alabama; J. S. Billings, U. S. A.; Freeman W. Miller, U. S. M. H. S.; Eugene Grissom, North Carolina; R. N. Todd, Indiana; to fill vacancy in Judiciary Council for class 1884, Dr. E. W. Clark, Iowa.

The chairman and secretaries of the various sections were then read as follows: Practice of Medicine, chairman, Dr. J. V. Shoemaker, of Pennsylvania; secretary, Dr. W. C. Wile, of Connecticut. Obstetrics and Diseases of Women, chairman, Dr. T. A. Reamy, of Cincinnati; secretary, Dr. J. T. Julks, of Arkansas. Surgery and Anatomy, chairman, Dr. C. D. Parkes, of Illinois; secretary, H. O. Wolker, of Michigan. Ophthalmology, Otology, and Laryngology, chairman, J. J. Chisholm, of Maryland; secretary, Dr. Thompson, of Indiana. Diseases of Children, chairman, Dr. William Lee, of Maryland; secretary, Dr. W. R. Tipton, of New Mexico. Dental and Oral Surgery, chairman, Dr. T. W. Brophy, of Illinois; secretary, Dr. John S. Marshall, of Illinois. State Medicine, chairman, Dr. D. J. Roberts, of Tennessee; secretary, Dr. Franzoni, of Washington, D. C.

The report was adopted, the name of Dr. Flint calling forth prolonged applause.

After the adoption of the report of the committee the following letter from the President elect was read, amid the applause of the Association: —

"Circumstances render it necessary for me to return to New York. Will you kindly express to our brethren, the members of the American Medical Association, with my sincere thanks, an assurance that I thoroughly appreciate the great honor which has been conferred upon me.

"I accept the honor, feeling assured that I may confidently expect coöperation and indulgence in my efforts to fulfill the duties which it involves.

"Yours, very truly, AUSTIN FLINT.

"CLEVELAND, O., *June* 7, 1883."

Recent Literature.

Vision: Its Optical Defects and the Adaptation of Spectacles. With seventy-four illustrations on wood, and selections from the test-types of Jaeger and Snellen. By C. S. FENNER, M. D. Second edition, revised, with additions by the author. Philadelphia: P. Blakiston, Son & Co. 1883. 8vo, 309 pages.

The additions to this edition consist mainly of a chapter of ten pages on defects of accommodation. Semi-popular, semi-medical, and somewhat loosely written, we see no reason to change the opinion expressed when the first edition appeared that the book fills no important gap in medical literature. The type and paper reflect credit on the publishers.

Medical and Surgical Journal.

THURSDAY, JUNE 14, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY, No. 4 PARK STREET, BOSTON, MASS.

THE AMERICAN MEDICAL ASSOCIATION.

THE late thirty-fourth annual meeting of the American Medical Association at Cleveland was a harmonious and generally successful occasion. The business bringing the members together was transacted methodically and in a more than usually dignified manner, whilst the usual hospitalities and social distractions were amply provided.

In all matters relating to Ethics or the Code a very temperate and judicious attitude was preserved. It was, however, sufficiently evident that such an attitude reflected strong and general convictions, and was not in any way indicative of indifference or a divided sentiment. A resolution on behalf of the St. Louis Medical Society, that a committee of one from each State be appointed to take into consideration the propriety of a revision of the Code of Ethics of the Association and to report at the next meeting, was very promptly tabled amidst much applause. Although we have long been of the number of those who think the Association's Code could be greatly improved and better adapted to the present day, at least in form, we recognize, with Dr. J. L. Atlee, the retiring President, as set forth in his address, the advantage which it has been to the profession, and indirectly to the public, in the past, and do not forget that there are certain proprieties to be observed even in retiring or discharging an old servant, nor do we think the present the proper moment to take any action.

The Board of Trustees of the Association Journal presented its report. The first number of such a journal will be published this summer, and continued weekly. The Board consider 2500 subscribers as secured for the journal. Dr. N. S. Davis, of Chicago, was elected its editor, and it will be published in that city. That the interests of the Association will be better served by such a weekly journal than by the old annual volume of Transactions we cannot doubt; how far it will be a genuine addition to medical journalism, and in itself a financial success depend upon various circumstances and in nowise upon our prophecies.

A resolution was adopted looking to the establishment of climatic observations at the general health resorts and watering places; and another to encourage a more general adoption throughout the country of some such training of nurses as obtains in the eastern cities.

In Dr. Austin Flint, Sr., of New York, the Association has elected a president for the ensuing year

than whom no one could be found to represent more suitably all that is best in its aims and aspirations.

Washington is to be the place of the next meeting.

THE ONE HUNDRED AND SECOND ANNIVERSARY OF THE MASSACHUSETTS MEDICAL SOCIETY.

THIS year's annual meeting of this venerable Society was marked by much that was instructive and enjoyable, and by no signs of decrepitude. The papers read were of a more than average interest and merit, and the change in location from Horticultural and the Music Halls to the Technology Hall and the new Skating Rink building was a very decided gain. The annual discourse, by Dr. Johnson, of Salem, we hope very shortly to publish in full, to be followed by other papers, and it will be found well worthy of careful perusal.

The Sanitary Exhibit, under the direction of Mr. T. M. Clark, illustrating the proper and faulty methods of plumbing, drainage, ventilation, etc., proved a very attractive and instructive feature of the occasion, and by no means behind the preceding exhibits of these anniversary meetings in general interest. A detailed account of the exhibit will be given in our next issue.

PHYSICIANS' VACATIONS.

THE approach of the vacation season, with its promise of rest and refreshment to the toilers in many other fields of labor, brings, we fear, to many an overworked physician the suggestion that his calling, almost alone of the professions, admits of no such intermission in its demands. He sees his neighbor, the parson, drop for a month or two his distinctive work as a fisher of men, and resort to a more literal imitation of the original apostolic profession. He sees the lawyer, at the closure of the courts, exchange his green bag for a portmanteau. The professor is off for a three-months' holiday, and even the business man, besides his regular fortnight's rest, can spend his nights and Sundays where nature assists him in forgetting his work. But the physician is too apt to believe that there is no chance of such a rest for him. Death has all seasons for its own, and Death's adversary often feels that he, too, must observe an eternal vigilance. Now and then a doctor is more favored in this regard. Certain kinds of specialists, and those who deal with diseases that can be made to wait on their convenience, can, so to speak, strike an armistice with the foe, and move into summer quarters. A few who enjoy a *clientèle* that leave their homes for the summer may find that if they remain at home themselves through the warm weather, like Othello, their "occupation 's gone," so that gain may coincide with pleasure in calling them to follow their patients. Indeed, we know of at least one physician (and undoubtedly there are others) whose professional income in his three-months' residence at a New England seashore resort, whither he repairs annually with his family, is greater than that of all the rest of the year, and he has a good home practice too.

In a few such cases the practitioner of medicine is able, without serious interference with his business, to secure a change of place, and an intermission in the ordinary round of labor. But to the great majority these opportunities do not come. The average general practitioner, and in many cases the specialist, cannot easily leave his work. The community at large are for the most part stay-at-homes, and the summer season forms no exception to their selecting inopportune times to be sick. Women continue to bear children in hot weather, and the children in country or in city cannot be depended upon to keep well in the "dog-days." For the ordinary physician in family practice we must admit, then, that it is hard to get away. He, perhaps, starts with the expectation of doing so some time during the season, whenever he can see an opening. But engagements press upon him. He waits to "see through" some important case; meantime another has absorbed his attention. So he defers the promised rest from week to week. Each day's work is not complete in itself, but is part of a series; it witnesses the perfecting of what has gone before, and at the same time the inception of new undertakings to be developed in future weeks. The bricklayer may stop his work for a fortnight, and then take it up where he left it. The physician's work does not wait for him; a cessation for two weeks may involve the loss of much more than the work of that time, namely, of all the work that would have been begun during that period, and the completion of which might have occupied him for months following.

Yet hard as it often is for the physician to take a holiday, none knows better than he that the human machine cannot run steadily seven days in the week, not even nights excepted, month in and month out, without sooner or later breaking down. A vacation is, as a matter of fact, a more imperative need for a physician than for almost any other class of men, for the reason that he is apt to be a harder worker. Whatever is an imperative necessity can be had, and we are glad to see that this fact is coming to be more and more appreciated among the best and the busiest practitioners. But there are still those who do not take for themselves what they would unhesitatingly prescribe for their patients, and who fret along under the galling harness till finally an involuntary vacation is forced upon them, spent at best in a tedious recovery of lost health and strength, which might have been kept at a much less expenditure of time and money by a timely vacation. The true economy for bodily health and for mental vigor is to obtain at seasonable intervals a relief from the stated work. Not all will take it in the summer. Each will go at the time when he can best afford it, when his favorite mode of recreation is most easily had, and when the good offices of his professional neighbors are most available. Some will prefer to concentrate their vacations for two or three years into one brief foreign

trip. Others, restrained by the *res angusta domi* from so extended a journey, will take their recreation in "small doses frequently repeated." But wherever, whenever, and however it be, see to it, gentlemen, that at sufficient intervals you have a true vacation, a *vacating* of the mind from its ordinary labors and anxieties. At such a time do not permit yourself to be beguiled into work. Leave your pocket-case and your stethoscope at home. Travel *incognito* if that is necessary to cover up your title of doctor. If you take a book let it be a novel, and not a monograph. Avoid hospitals as you would the plague, — or, rather, anybody else would the plague. There are mental ruts as well as physical ones from which you need to get out. Remember it is the *doctor* who is taking a vacation. This is the reason why attendance at annual society meetings, valuable and desirable as it is, should not be made to comprise the entire recreation of the year. If it is so (we say it with all respect for the great worth of the scientific work presented at most of our medical gatherings), the greatest benefit which such an attendant will receive will be not from the professional papers he will listen to, but from the familiar faces he will see; it will consist in the social rather than in the medical features of the meeting. We believe firmly in medical societies, but if an annual meeting is the only "outing" a doctor gets in the year, we are almost tempted to say the less of the communications he hears, the less of the scientific sessions he attends, the better. The atmosphere in such gatherings is, of course, distinctly professional, and for their intended objects properly so. But to attain the highest ideal of individual culture every man should be able at times to go out of his specialty, to see other phases of life, to associate with men of other callings, to close his eyes for a brief time to human suffering and disease, and to open them to the boundless riches of the world of nature.

MEDICAL NOTES.

— A novel and important suit for libel has recently been tried in the New Jersey courts. The indictment was brought against the editor of the *Red Bank Register* for libeling the people of Red Bank. The charge was that in August last the defendant sent communications to New York papers concerning the prevalence of typhoid and malarial fever at Red Bank, and that he also published similar articles in his own paper. These articles, it is claimed, caused a serious depreciation in the value of real estate. After a protracted trial the court instructed the jury to acquit, on the ground that the State failed to prove the falsity of the articles, and the defendant was discharged.

— The State of Michigan has passed a new law intended to prevent the unseemly quarreling of heirs over wills; in which quarrels, of course, the ostensible ground of contest is as to the mental capacity of the devisor. This question is settled once for all, by the appearance of the testator in court in his own person, when any objectors are to offer testimony against his intellectual soundness, or else "forever after hold their peace." The beauty of this method is that the question of mental fitness is not complicated by any considerations depending on the nature of the will itself, for the heirs are ignorant of what he has provided for each of them. If the testator convinces the judge of his mental soundness he lies down in his grave with the calm assurance that he knows what is to become of his property, which, it is said, under the common laws is not always the case.

— "The Society for the Promotion of Human Suffering," is what a Philadelphia contemporary calls the Antivivisection organization.

Correspondence.

LETTER FROM CLEVELAND.

MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

CLEVELAND, OHIO, *June* 9, 1883.

MR. EDITOR, — The Thirty-fourth Annual Meeting of the American Medical Association has been accomplished and its members dispersed, some to return to their homes by the shortest possible routes, others, more wise, to delay on the way and have their vacation out.

There has been altogether too much hot weather connected with this meeting. Men came here provided with winter or heavy spring clothing, to find it too hot for exertion, and for the first two days the heat was almost unbearable. Fortunately the meetings of the General Session were held in a hall where there were free currents of air and open windows for relief. Then these lake cities, it seems, are subject to heavy showers of rain, which come up suddenly as if to give visitors a taste of the western tornado, but which subside as suddenly, leaving a freshness and coolness of the air behind. These showers interfered very materially with the comfort of those members who went on foot to the receptions of Tuesday and Wednesday nights. Euclid Avenue, along which a long tramp had to be made to reach the various houses, is very beautiful with beautiful mansions and grounds; but the sidewalks and roadways are not agreeable after a rain; and the electric light, which is used to the exclusion of gas, makes the dark places seem terribly dark.

The hotels were all crowded to overflowing long before the majority of the members had reached the city, but private citizens opened their houses with great liberality, and those who were fortunate enough to be quartered upon them were, as time passed, looked upon with envy by their brethren in the hotels. As the races also took place this week, it was no uncommon sight to see a grave doctor elbowed by a horsey looking neighbor, with a fancy colored shirt, enormous cuff-buttons, and a horseshoe pin stuck in his shirt-bosom.

Case Hall, the place appointed for the meetings, was admirably adapted to the purpose, being situated just off from the public square, and within a convenient distance of the hotels, while near it were the places of meeting for the various sections. The hall itself was quite large enough for all who attended, and had excellent acoustic properties. Dr. Atlee, in the delivery of his address, failed to make himself heard satisfactorily at times, but his voice seemed to accustom itself

to the hall and to grow stronger at each meeting. His vitality and ease of movement was something remarkable, when his eighty-four years of age are considered.

The Registration Committee made a mistake by not holding an evening session on June 4th, as nothing quiets one so after a long trip on the railroad as to feel that all things are ready for business; but they worked rapidly, and some six hundred were registered in time to attend a part of the proceedings in general session of the first day. There was an attempt to make a little capital out of the requirement of a subscription to the Code of Ethics on registering each name; but, as Dr. N. S. Davis stated in general session, it was simply a matter of expediency in lieu of the old method of signing the book which contained the Code, and which was filled with names duplicated and reduplicated interminably. The Committee of Arrangements did their work admirably, and Dr. X. C. Scott, as chairman, was constantly alive to the exigencies of the occasion. Unfortunately there was some local jealousy displayed. Dr. R. A. Vance and Dr. Scott had a personal altercation, and Dr. Weber was also mentioned as having had a disagreement with the Committee; but these were purely local matters, and did not reach in any way the body of the Association.

The absence of one of the usual features attendant upon these meetings was very agreeably conspicuous: there were no book or medicine agents, circulars, or samples to be seen in or about the hall. They were all assigned to a special and spacious hall in which to exhibit their wares, and those who were brave enough to confront them, en masse as they were, saw a very interesting sight, — the exhibit of drugs and instruments was really artistic and beautiful. The agents of gynæcological chairs were busy at work with each succeeding stranger, making him assume all sorts of positions for all sorts of purposes; and a stream of linen dusters, and commodious satchels filled with samples of drugs, which the recipients had promised faithfully to try on their patients, and with copies of the journals of the day, kept pouring out of the main entrance.

In the hall itself, in general session before the final adjournment, fully eleven hundred members circulated freely without crowding; with them, of course, were a number of ladies and non-professional visitors. Ohio and Pennsylvania sent a large proportion of the delegates, and Indiana, Illinois, and Michgian came next in numbers, but New York was represented by over sixty members, among whom were prominent the two Flints, Gouley, Henry D. Noyes, Lewis H. Sayre, Didama, Bell, and others. Massachusetts was represented by twenty-one members. There were, of course, many others of prominence in the profession from all sections of the country, but it would be invidious to make further distinctions.

In the report of the proceedings it will be seen that the sections were all fairly represented, although the attendance on some was rather meagre, partly on account of the weather and closeness of some of the rooms provided for their accommodation. The papers, too, were some of them open to the criticism of a want of proper selection. This led to a resolution offered in general session on the last day: That all papers should first go to the Trustees to be scrutinized, before passing into the hands of the Committee of Arrangements. The Code cropped out a little here and there. Dr. Goodwillie, of New York, was obliged to resign the position of chairman of the section on Dental and Oral Surgery, his registration was canceled and his fee returned to him, on his acknowledgment of being one of the new coders. Dr. Gihon, U. S. Navy, in the section on State Medicine, read a paper looking mainly to the improvement of medical education, and in his enthusiastic and forcible manner he alluded to the New York Code in comparison, very much after the Biblical injunction of plucking out the beam in one's own eye while attending to the mote in the eye of one's neighbor. This led to some misunderstanding on the part of those who read his remarks, and caused him to make a statement in general session to the effect that he was fully in accord and sympathy with the Code of Ethics of the Association. With these exceptions, and with the fact that a printed circular giving the names of those New York County men, who adhered to the Old Code, was distributed in the hall, the code question was ignored; those who referred to it in conversation spoke as if it was not their funeral, and that if these men chose to take such a stand it was their own affair, and not necessary to make any talk about it.

In general session the adoption of the Journal plan met with marked favor; it was stated that, in response to the circular of inquiry, out of a very large list of approvals only twelve objections had been made, which were in favor of continuing the volume of Transactions as at present. There was a motion made to publish the general proceedings in a thin volume, to accord with the previous ones, but it found few supporters. Dr. N. S. Davis, on being made editor-in-chief, stated that arrangements had already been perfected by which he hoped to have the first issue out by July 1st; that Dr. Wm. Lee of Washington, D. C., would take the Department of the Progress of Medical Science, and had the National Medical Library to draw upon for the purpose; and that other associates would soon be selected. Dr. Davis spoke very earnestly and feelingly of his sense of the importance of the undertaking.

The entertainments were on a very extensive scale; on Tuesday night, the physicians of Cleveland entertained the Association at the Opera House, the orchestra of which was floored over on a level with the stage; the house was beautifully adorned with flowers and hangings; a band of music played at intervals through the evening, and it was filled with people, — a large number of ladies being present. A passage way was made to a neighboring building, the roller rink, which was also decorated and used for refreshments, which were served on little tables; an uncomfortable jam prevailed at times in the passage way, but it would have been very difficult to avoid this, and everybody was perfectly good natured about it. The receptions at private houses were very numerous, some twenty in number, of which three were withdrawn on account of deaths and sickness in the families, and they were held at the handsome private residences in the fashionable part of the city, namely: Euclid Avenue and Prospect Street. The magnificent lawns and shrubbery of these houses were delightful; and the interiors were examples of all that is most in vogue in the style of house-furnishing of to-day, filled with bric-a-brac-paintings, statuary, engravings, and all that wealth of elegance which we are fast learning to appreciate. There were no next morn-

ing headaches, lemonade being the only beverage at most of the receptions, claret punch at two or three. A trip to River Bank on Friday, after adjournment, on the Nickel Plate Road, at the invitation of Mr. and Mrs. Eells, made an agreeable close to the meeting.

The Rocky Mountain Association, which was formed out of the members and their wives who attended the meeting of the Association in San Francisco in 1871, held their annual meeting while here; the membership originally of one hundred and twenty-three is now reduced to eighty. Dr. Pollock, as presiding officer, delivered an address in which he hoped the Association might continue as long as there shall be one member left, and Dr. N. S. Davis moved that the last man be instructed and empowered to collect the records of the Association and deposit them in the Toner Library at Washington.

Several addresses were made by others, and Dr. J. F. Hibbards, of Richmond, Ind., was elected President, with Dr. John Morris, of Baltimore, Secretary and Treasurer.

One incident cast a gloom over the proceedings, the death of Dr. John Coleman Hubbard, of Ashtabula, Ohio. He was the guest of Dr. G. C. E. Weber, of Cleveland; and while talking and smoking a cigar after lunch was stricken with apoplexy and died within fifteen minutes from the time of the attack. He was born in Trenton, N. Y. (?), in 1820, and graduated at the College of Physicians and Surgeons of New York in 1845, since which time he enjoyed an extensive practice, and gained the reputation throughout the State of Ohio of a skillful and successful physician.

Yours truly, L.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 2, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Diarrhœal Diseases.
New York	1,206,590	634	261	20.16	13.35	6.11	3.69	3.55
Philadelphia	846,984	340	120	20.29	3.82	7.33	5.29	—
Brooklyn	566,689	221	75	20.25	15.30	5.40	6 30	2.70
Chicago	503,304	—	—	—	—	—	—	—
Boston	362,535	178	62	21.84	19.04	5.60	3.35	3.36
St. Louis	350,522	125	45	28.00	8.80	9.60	8.00	1.60
Baltimore	332,190	156	53	17.92	8.96	6.41	6.41	1.92
Cincinnati	255,708	94	32	17.07	19.16	1.06	4.26	4.26
New Orleans	216,140	155	48	39.00	3.90	.65	—	9.10
District of Columbia	177,638	81	23	16.00	6.15	—	3.69	2.46
Pittsburg (1883)	175,000	52	16	11.52	11.52	1.92	1.92	5.76
Buffalo	155,137	72	17	15.29	12.51	1.39	1.39	4.17
Milwaukee	115,578	63	33	21.98	10.99	—	1.57	6.28
Providence (1883)	116,755	40	3	5.00	10.00	2.50	—	2.50
New Haven (1883)	73,000	26	6	11.54	11.54	—	7.69	—
Charleston	49,999	—	—	—	—	—	—	—
Nashville	43,461	27	8	29.60	25.90	—	—	—
Lowell	59,485	31	8	13.04	19.56	—	3.22	—
Worcester	58,295	17	3	27.66	27.66	—	5·88	—
Cambridge	52,740	—	—	—	—	—	—	—
Fall River	49,006	23	6	8.70	21.75	—	—	—
Lawrence	39,178	6	3	—	33.33	—	—	—
Lynn	38,284	15	6	13.33	6.66	—	—	6.66
Springfield	33,340	14	8	57.12	14.28	21.42	14.28	—
Salem	27,598	16	4	6.25	6.25	—	—	—
New Bedford	26,875	7	4	14.28	28.56	14.28	—	—
Somerville	24,985	5	0	—	—	—	—	—
Holyoke	21,851	13	9	46.14	30.76	—	15.38	—
Chelsea	21,785	8	1	—	—	—	—	—
Taunton	21,213	6	0	16.66	33.33	—	—	—
Gloucester	19,329	2	0	—	—	—	—	—
Haverhill	18,475	9	2	—	11.11	—	—	—
Newton	16,995	8	0	—	—	—	—	—
Brockton	13,608	5	1	—	40.00	—	—	—
Newburyport	13,537	8	4	37.50	25.00	—	—	—
Fitchburg	12,405	9	1	—	—	—	—	—
Malden	12,017	—	—	—	—	—	—	—
Nineteen Massachusetts towns	146,960	47	11	8.51	10.64	—	2.13	—

Deaths reported 2513 (no report from Chicago): under five years of age 873: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 526, consumption 386, lung diseases 282, diphtheria and croup 123, scarlet fever 103, diarrhœal diseases 74, measles 54, small-pox 45, malarial fever 30, cerebro-spinal meningitis 27, typhoid fever 27, whooping-cough 23, erysipelas 10, puerperal fever eight, tetanoid fever one, typhus fever one. From *measles*, New York 19, Boston 15, Milwaukee and Nashville four each, Philadelphia and Brooklyn three each, Holyoke two, St. Louis, Salem, Westfield, and Amherst one each. From *small-pox*, New Orleans 40, St. Louis four, Philadelphia one. From *malarial fevers*, New York 11, Brooklyn seven, New Orleans four, St. Louis, Baltimore, and District of Columbia two each, New Haven and Springfield one each. From *cerebro-spinal meningitis*, New York six, Milwaukee four, Cincinnati three, Philadelphia, Buffalo, and Lowell two each, District of Columbia, Pittsburg, Worcester, Fall River, Lynn, Springfield, Taunton, and Holliston one each. From *typhoid fever*, Philadelphia 11, New York five, St. Louis two, Boston, Baltimore, Cincinnati, District of Columbia, Buffalo, Nashville, Worcester, Fall River, and Holyoke one each. From *whooping-cough*, Philadelphia six, New York five, District of Columbia and Newburyport three each, Cincinnati two, Brooklyn, St. Louis, Buffalo, and Springfield one each. From *erysipelas*, Philadelphia three, New York two, Brooklyn, St. Louis, Bos-

ton, New Orleans, and Nashville one each. From *puerperal fever*, Nashville two, Brooklyn, Boston, Cincinnati, District of Columbia, Milwaukee, and Lowell one each, From *tetanoid fever*, Holyoke one. From *typhus fever*, Baltimore one.

Thirty-two cases of small-pox were reported in St. Louis, Baltimore 16, Buffalo nine; scarlet fever 21, diphtheria 19, typhoid fever 12 in Boston; scarlet fever 14, diphtheria three in Milwaukee.

In 37 cities and towns of Massachusetts, with an estimated population of 1,105,589 (estimated population of the State 1,922,530), the total death-rate for the week was 19.66 against 20.40 and 20.44, for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending May 19th, the death-rate was 21.3. Deaths reported 3518: acute diseases of the respiratory organs (London) 302, measles 89, whooping-cough 66, scarlet fever 65, fever 48, diarrhœa 32, diphtheria 23, small-pox (Newcastle four, London and Leeds one each) six. The death-rates ranged from 12.6 in Bolton to 31.4 in Hull; Leicester 16.1; Derby 18.9; Nottingham 19.9; London 20.2; Cardiff 22; Manchester 24.8; Liverpool 25.9; Leeds 26. In Edinburgh 18.6; Glasgow 35.1; Dublin 29.5.

For the week ending May 12th, in 169 German cities and towns, with an estimated population of 8,663,340, the death-rate was 27.7. Deaths reported 4607; under five years of age, 2093; consumption 712, lung diseases 676, diphtheria and croup 175, diarrhœal diseases 156, measles and rötheln 105, scarlet fever 66, typhoid fever 48, whooping-cough 37, puerperal fever 23, small-pox (Mainz and Wiesbaden one each) two, typhus fever (Braunschweig one) one. The death-rates ranged from 16.7 in Wiesbaden to 46.7 in Augsburg; Königsberg 31.1; Breslau 34.8; Munich 34.2; Dresden 30.6; Berlin 28.6; Leipzig 29.2; Hamburg 30.2; Cologne 26.9; Frankfort a. M. 23.2; Strasburg 30.1.

For the week ending May 12th, in the Swiss towns, there were 39 deaths from consumption, lung diseases 31, diarrhœal diseases 13, diphtheria and croup nine, measles seven, whooping-cough three, scarlet fever one, typhoid fever one, puerperal fever one. The death-rates were, at Geneva 33.8, Zurich 18, Basle 14.3, Berne 33.9.

The meteorological record for the week ending June 2d, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date. May June, 1883.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 27	29.682	60	70	58	93	84	93	90	SW	SW	SW	8	7	5	R	O	C	—	—
Mon., 28	29.728	67	78	58	68	43	72	61	W	W	W	2	18	5	C	F	C	—	—
Tues., 29	29.800	66	77	57	72	45	75	64	SW	SW	NW	9	12	5	O	F	C	—	—
Wed., 30	30.135	61	79	52	64	45	74	61	W	SE	SE	8	16	11	C	C	F	—	—
Thurs., 31	29.931	65	76	54	91	71	75	79	S	SW	W	17	10	9	R	B	F	—	—
Fri., 1	30.261	65	75	52	70	43	65	59	NW	N	N	8	12	4	C	C	C	—	—
Sat., 2	30.484	61	71	51	54	65	74	64	NE	E	SW	4	15	4	C	C	C	—	—
Means, the week.	29.957	64	79	51				68										17.15	.51

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; B., clearing.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JUNE 1, 1883, TO JUNE 8, 1883.

ALEXANDER, CHARLES T., major and surgeon. So much of paragraph 6, S. O. 82, A. G. O., April 10, 1883, amended to direct that he be relieved from duty at the United States Military Academy, West Point, N. Y., October 1, 1883. Paragraph 7, S. O. 125, A. G. O., June 1, 1883.

MCKEE, J. C., major and surgeon. Assigned to duty as post surgeon Presidio of San Francisco, Cal. Paragraph 2, S. O. 56, Department of California, May 25, 1883.

DE LOFFRE, A. A., captain and assistant surgeon. To proceed to Madison Barracks, N. Y., and report to the post commander for duty. Paragraph 2, S. O. 98, Department of the East, June 5, 1883.

CORRECTION. AMERICAN SURGICAL ASSOCIATION.

MR. EDITOR, — The report of my remarks made at the meeting of the American Surgical Association at Cincinnati, does not, I think, bring out clearly the point I aimed at making, namely, that in ligature of arteries the finger rather than the eye of the operator recognizes the vessel in the wound.

"C'est au doigt qu'il faut avoir recours sur le vivant, lui seul voit clair au fond des plaies inondées de sang.

"L'élève ne doit jamais l'oublier. Il faut qu'il passe à l'amphithéatre l'éducation de son doigt plutôt que celle de ses yeux. C'est donc les yeux en l'air et le doigt dans la plaie qu'il faut s'habituer à lier les artères une fois les incisions superficielles accomplées. Ecoutez Sabatier. 'Les vaisseaux, les nerfs, le tissu cellulaire, les muscles qu'il est si facile de distinguer de separer sur le cadavre, paraissent uniformement colorés par le sang qui les couvre et se confondent sur l'homme vivant pour tout autre que le chirurgien habile.'

"Sur le vivant les arières battent mais pas tant qu' on le croirait (Richet), pas toujours au voisinage des anéurysmes (Hodgson)." Précis de Manuel Operatoire Ligatures des Artéres, L. H. Farabeuf, pages 8 and 11.

Yours truly, W. C. B. FIFIELD.

BOOKS AND PAMPHLETS RECEIVED. — Handbook of Medical Electricity, with a Description of a New Medical Battery. By A. M. Rosebrugh, M. D., Surgeon to the Toronto Eye and Ear Dispensary, etc. Printed for the Author. Toronto. 1883.

Annual Report of the Adjutant-General of the Commonwealth of Massachusetts for the Year ending December 31, 1882. Boston: State Printers. 1883.

Insanity; its Causes and Prevention. By Henry Putnam Stearns, M. D., Superintendent of the Retreat for the Insane, Hartford, Conn., etc. New York: G. P. Putnam's Sons. 1883.

Aids to Medicine. Part I. (Double Part.) The General Diseases, Diseases of the Lungs, Heart, Blood-Vessels, and Liver. By C. E. Armand Simple, B. A., M. B. Cantab., L. S. A., M. R. C. P. London. New York: G. P. Putnam's Sons. 1883.

Brain-Rest. By J. Leonard Corning, M. D., Resident Assistant Physician to the Hudson River State Hospital for the Insane, etc. New York: G. P. Putnam's Sons. 1883.

Quarterly Report of Medical Officers United States Army, with their Stations and Duties, as reported to the Surgeon-General April 1, 1883. Washington: Surgeon-General's Office.

A System of Human Anatomy, including its Medical and Surgical Relations. By Harrison Allen, M. D. Section IV. Arteries, Veins, and Lymphatics. Philadelphia: Henry C. Lea's Son & Co. 1883.

Mr. and Mrs. Morton. A Novel. Second Edition. Boston: Cupples, Upham & Co. 1883.

Original Articles.

ANNUAL ADDRESS

BEFORE THE MASSACHUSETTS MEDICAL SOCIETY, JUNE 13, 1883.

BY AMOS H. JOHNSON, M. D., SALEM.

A TRUTH so important as to prove like a diamond among other gems of wisdom, we should seek not only to cut into some sharply-defined form of utterance, but to set in such relations to other truth as will best exhibit its proportions.

Upon the seal of our Society we find, set like a brilliant of the first water, the motto "*Natura duce*," a motto so wisely obeyed, so judiciously illustrated, so eloquently taught by eminent men, not a few of whom have been members of this Society, that the truth it utters profoundly influences the modern study and treatment of disease. Its brevity sharpens the truth it commends. But it gains a peculiar pungency from the colossal assurance with which it thrusts aside all other guides in order to place itself foremost in our thoughts. In this conspicuous position it challenges critical examination of its right to sole and supreme authority. Therefore, since the part assigned me today is to address you upon some theme of general interest, I have chosen to invite you to a brief study of the meaning and limitations of this motto.

We shall not be disappointed to find that it is one of those brilliant half-truths whose importance may lead us to overstate its value; or to find that its simplicity is more apparent than real; or to find that it is only partially applicable to our professional work; or to discover that its converse is as true; so that we may as wisely say "guide nature" as "let nature guide."

The attempt to condense into two words a cardinal principle of medical study and practice has proved rarely felicitous. But, like all such epitomized teachings, it instructs us as much by its implications as by its direct exhortation. Our high esteem for its general fitness to our needs is not decreased by recognizing the fact that it suggests correlated truths which, pressing hard upon its limits, are the better defined, defended, and practiced. . . .

What is the intent of this excellent motto? It is put forth to check the imaginative and speculative study of the human system. It demands that the study of facts shall suggest and sustain our theories and methods of action. . . . It bids us first to observe the natural order, the mutual dependence, and the results of vital processes, and then to favor and expedite, rather than to interfere with, the sequence of operations by which disease runs its natural course toward recovery.

The superlative value of such teachings we all concede, without stopping to notice that they have one very conspicuous deficiency. An old receipt for cooking a hare began, "first, catch him." The rule "*Natura duce*" is only productive when married to the rule, to guide nature. For nature only enlightens those who succeed in suitably conditioning her operations. She often leads as the escaping criminal leads the detective, or the fleeing savage his foe, when the moccasined foot selects the rocky ledge, or the bed of the running stream, or carries its owner backward over

first impressions until it can fly over a trackless path. . . .

When we study the history of the progress of learning two facts amaze us, — one, the failure of man through so many years to understand the phenomena of nature, the other, the patience and labor by which the secrets of nature were extorted from her. Up to the last half of the sixteenth century we have no evidence that men had learned more of electricity than that amber when rubbed possessed the property of attracting and repelling bodies, that the torpedo gave electric shocks, and that the human body sometimes emitted electric sparks. Since that time, the facts of electricity and electro-magnetism have been obtained by the conception and construction of most ingenious apparatus, by thousands of successful and unsuccessful experiments, by keen mental analysis, by mathematical calculations, and wise theories. . . . Quite early in his career as an electrician, Faraday conceived the use of polarized light to reveal the electric condition of transparent bodies. But not until twenty-three years after his first recorded trials do we find him, undeterred by failures repeated through many years, working with fresh, and at last successful ingenuity, to compel nature's assent to the truth of his conception that magnetic force and light have relations to each other. Who shall say which led in these discoveries, — Faraday or nature? Nature repelled his advances. But, however baffled, his persistency wearied her to utter her secrets. We realize that even unsuccessful experiments were the voice of nature saying, It is useless to seek in such directions. But this voice is ambiguous, and as often seems to many to say, There is no such fact as you seek. . . .

The telescope and the microscope are evidently the product of the contrivance of apparatus to determine the action of light in its passage through different media, and of the mathematical calculation of angles of refraction produced by lenses of different density and curvature, no less than they are the outcome of observed natural phenomena and laws. When with national pride we see Alvan Clark & Sons, of Cambridge, through weary months of labor, shaping with exquisite skill a telescopic object-glass of thirty-two inches aperture; or, in order to photograph the transit of Venus, preparing a plain mirror for a heliostat, which must be so undeviatingly exact, that, as Professor Newcomb tells us, if a straight edge laid upon the glass should be the $\frac{1}{100000}$ of an inch above it at the centre, the reflection would be useless; we realize that the mind of man leads nature to enter paths she would never voluntarily take, and there holds her unwillingly, subject to his familiar gaze and critical manipulations. The electrician detects her hidden movements with his galvanometer, weighs her with his electrometer. The astronomer outleaps the powers to which his own physical structure restricts him, wrests from nature her optical secrets, and with instruments of precision compels her to permit his eye to rove among the heavenly bodies. In like manner the student of histology, with the microscope, brushes away the veil behind which nature conceals some of her most attractive and important features. It is common to speak of these results as the product of the applications of science by the art of man, but science is itself the product of the art of man. The unconscious forces of nature have not conspired during the ast century to captivate the attention of men, or

forced themselves into recognition, in order to pour into our minds the inspiring revelations with which modern science is radiant. Nature alone never led scientists to their present heights of learning. Man has won or driven nature to become her own interpreter. This has been accomplished, it is true, with more reliance than formerly, upon the results of experiments and observation, but chiefly by reason of the mental activity, judgment, and determination with which these results have been analyzed, and the fruits of such analysis have been made the basis of calculations, for the construction of channels through which the operations of nature must proceed, and so proceeding must reveal their method.

We have thus exhibited the fact that success in detecting, no less than in using, physical forces and their processes, demands a masterly adjustment of the conditions under which the methods of nature shall operate, no less than compliance with these methods, in order to more clearly present the same truth concerning the special department of nature in which we work. Because in dealing with man we encounter all other physical forces combined with the distinctive characteristics of animal and mental life. . . .

Our complicated organizations present problems whose intricacy far exceeds that of any operations of inorganic nature. This intricacy is increased a thousand-fold when normal physiological action is thrown into a vast variety of those exceptional reactions and phases which we call disease. When, therefore, we assent to the soundness of the counsel in the words "*Natura duce*," we are reminded of the inconsequential remark of the notorious Duke of Newcastle, "Oh yes, — yes, — to be sure! Annapolis must be defended; — troops must be sent to Annapolis. — Pray where is Annapolis?" To be sure we must follow the indications of nature, but what are they? They are like a system of guiding signals to those without the key. Through centuries these signals spelled before men the language of nature only to bewilder and oppress them. . . . They failed to understand her, partly because their minds were dominated by superstitious beliefs, but primarily because nature did not plainly teach them how to interpret her. When at last men began to cease their futile efforts to propitiate imaginary spirits which moved the signals they saw, and set themselves to decipher nature's sign language, they perceived the nature of an appalling task, but accomplished little in its performance. For what the Rosetta Stone was to the language of ancient Syria, the teachings of Hippocrates and of Bacon were to the hieroglyphics of the human system. That stone secured only a fragmentary key, legible only to scholarly minds, and useful only to those who could use it with consummate patience and critical power. The resolve to study the indications of nature was not the same as their actual interpretation. The problem was not solved, but only the true direction of investigation indicated.

> "Bacon, like Moses, led us forth at last;
> The barren wilderness he passed;
> Did on the very border stand
> Of the blest promised land,
> And from the mountain's top of his exalted wit
> Saw it himself, and showed us it.
> But life did never to one man allow
> Time to discover worlds and conquer too;
> Nor can so short a line sufficient be
> To fathom the vast depths of Nature's sea."
>
> COWLEY, *Ode to the Royal Society.*

We want no better evidence of the vagueness of the signs by which nature leads us than the errors into which the father of rational medicine, fell notwithstanding his unsurpassed powers of critical observation. . . .

Notwithstanding the great advances made during the present century in the interpretation of vital and morbid phenomena so much still remains unknown that the known fails to prove an unequivocal guide. So much that is uncertain lies back of, between, and beyond the best determined facts, that their significance admits of a great variety of interpretation.

In a very thoughtful and instructive annual address, delivered in 1855 before this Society by one of its former presidents, occurs the following statement: "The most important methods of coöperation are indicated by nature herself." This he illustrates by enumerating many facts, from which, for lack of space, we select but one class. "Vomiting," he tells us, "relieves a headache or surfeited stomach. It also attends the onset of some violent diseases, indicating nature's effort to repel them." From these facts he infers the value of a judicious use of emetics. This mode of relief, in common with others enumerated, he declares to be one "which nature so uniformly adopts and unequivocally points out." When the young practitioner attempts to act upon such suggestions of nature he finds himself on treacherous ground, or, in other words, he finds that the indications of nature are very far from being unequivocal. The vomiting which springs from cerebral disease, from seasickness, from organic disease of the kidneys, from phthisis, from diseases of the heart, from pleurisy, from uterine irritation, appears to indicate that nature is attempting to obtain relief by emesis. Shall we render assistance with emetics? If excessive emesis endanger the patient's life the plain indications of nature invite us to address our remedies directly to the disturbed stomach. Yet the agitation of the stomach may be like a flag of distress from some point apparently near, but to which direct approach is either impossible or destructive. The vomiting of seasickness, quite contrary to indications, is often relieved by food and stimulants; that of phthisis by remedies to mitigate the cough; that of pleurisy and pericarditis by remedies selected with reference to the inflamed structures; that of Bright's disease by means which relieve congestion, œdema, and reflex irritability arising from the obstructed or contracted kidney.

There are many not merely plain indications, but importunate cries of nature, which lure to death those who comply with them. The insatiable thirst which attends prolonged emesis or choleraic discharges, yielded to, perpetuates the disorder to its fatal issue. The hunger and returning vigor of the convalescent from typhoid fever prompts him to partake of solid food, to rise, to walk; he obeys nature, and in a few days dies from a perforated intestine. The relief which comes with the effusion of acute pleurisy bids the patient to return to his usual exposures and labors. He goes, to come again, perchance a bonanza to an enthusiastic disciple of paracentesis thoracis, equipped with his recently purchased aspirator, or possibly to the champion of permanent openings and antiseptic dressings for empyema; but personally a miserable ruminator, through a tedious experience, on the deceptiveness of nature. The adult sees the larger proportion of children pass unscathed through the ordeal of measles. He asks himself, Shall not a man have

more endurance than a child? Confident in his acquired vigor, he treats the cough of measles according to its appearance, as an ordinary bronchial cold, and finds, too late to save his life, that "things are not what they seem." A severe attack of scarlet fever, followed by a gradual recovery of strength, makes its plain demand for careful nursing. On the other hand, the trivial sickness which sometimes attends the primary stages of the same disease no less plainly guides to that small degree of care, out of which springs many a fatal case of scarlatinal nephritis. In Bright's disease, the excessive loss of albumen has been accepted by some as plainly indicating an albuminous diet to replace the portion lost. But when Pavy, by a similar direct interpretation of an unequivocal indication of nature, for a long time taught the use of a saccharine diet to make up for the large amount of sugar daily excreted in diabetes, he and his patients tasted "the sweets of adversity." The language of nature said most plainly that diabetes was a disease of the kidneys. But the physiological and chemical experiments of Claude Bernard and others showed it to be due to faulty assimilation, involving the glycogenic function of the liver. . . .

The comparatively recent discovery of pathological conditions which give rise to symptoms so remote from their source that for centuries they received only fanciful interpretation, shows how ambiguously nature teaches.

It is less than forty years since the modern science of gynæcology gave us the right understanding both of the cause and the successful treatment of a legion of symptoms due to uterine disturbances.

It is but fifty-six years since Richard Bright led the way to a true interpretation of renal diseases, and presented in harmonious grouping, as the related products of mutually dependent pathological changes, symptoms previously deemed indicative of special and distinct affections.

It is but a few decades since the structure and functions of the nervous system, the phenomena of automatic and reflex action, together with vaso-motor disturbances, and the locality of pathological changes, were so discovered and announced as to give the key to manifold obscure disorders.

These advances have been made by determined efforts to *force* the secrets of nature. . . . They have comprehended physiological experiments, which have fairly tortured nature to utter her secrets, and cross-examinations, by experiments, varied, repeated, and reiterated by a multitude of observers, in order to circumvent nature's evasive testimony. . . .

After all the painstaking thermometrical study of disease, how diverse are well argued interpretations of the kind and degree of assistance for which an elevated bodily temperature calls.

Notwithstanding the too frequent repetition of the vivid clinical picture of phthisis, and the elaborate labors of the ablest investigators to detect its true causes and nature, the medical profession seem to await an Ariadne to lead them out of the labyrinth of conflicting observations into which they have pushed their way, and where at present, with microscopes pointed at some jerking baccilli, they are wondering if they behold the minotaurian monsters they seek to subdue.

The invaluable discoveries of Tyndall, of Pasteur, of Villemin, of Koch, and other equally eminent students of micro-organisms, have indicated to Lister and his school the need of a peculiarly antiseptic surgery. Yet how numerous are practitioners, equally able and desirous to obey the teachings of nature, who differently interpret these demands of nature, neglect the Listerian method, and rival his successes. . . . These, like a host of other similar examples, seem to give no little sarcasm to the teaching, "Treat your patients according to the indications of nature." . . .

If, to avoid perplexities arising from too ingenious efforts to explain and manipulate the processes of nature, one resolves to adopt a purely expectant treatment, he finds that a deferential following of nature is not so simple as it appears. It does not furnish the escape from responsibility which it promises. . . . Variations in one's ordinary physical environment may involve the favorable or fatal action of forces as potent as any concocted by pharmacy. The more rigid one's determination to simply furnish nature the conditions under which she can the most successfully extricate herself from disease, the more imperative becomes the need of critical knowledge of all physical forces, and the manner and measure of their influence over the human body of all physiological and pathological facts, and also of trained powers of perception, analysis, and judgment, exercised under a sense of personal obligation to control by our best judgment and activities *all* agencies which may affect vital processes.

This leads me to remark, that we gain a special warrant for an active leadership of nature in disease from the constitution of man. We deal not with nature merely, but with human nature. That is, with nature plus the supernatural. Or, in other words, with a physical nature united to a mind above or over it, which both directly and indirectly disturbs and controls its processes. . . .

Since we find this supernatural element, with its secret workings, exerting its influence in disease, we have no choice but to guide a control which it already exercises. Or, in other words, since physiological and pathological processes are subject to the lead of the persons in whom they occur, and since this mental action may be secretly indulged with little wise regard to its physical effects, therefore the physician must take the guidance of nature from ignorant and unpracticed hands into his own.

The fancies and schemes of patients and their friends are always a feature of sickness. When the physician has merely to displace the false notions of his patient, his task is sufficiently difficult. But how common is it to have added to such mental hindrances a most pestiferous onset of officious suggestions! They come like locusts for multitude from the four winds of heaven. By what spell they were ever evoked from human minds, by what assurance of infallibility they each claim sole title to credence no mortal can tell, for their harmony is discord. Yet their presence is as unmistakable as that of a pursuing swarm of hornets, although sometimes without the valiant trumpeting of this insect, they work like the thickly-sown larvæ of the moth, silently eating and weakening the robe of council with which the doctor seeks to protect his patient. Is one smitten with sickness, scarcely has an order of treatment been initiated when questions and suggestions and prescriptions and directions and contradictions pour in from quarters near and remote. They may spring from the unwisely expressed sympathy of friends, and from their discordant faiths in special remedies, or men, or systems of medicine, or from the enthusiasm of some clerical or lay "amateur

therapeutist." But practically they offer so many different schemes for leading the sickness to a successful issue. Amid the clash of these designedly friendly efforts, who shall retain control of the conditions and forces by which the patient is to be relieved? The successful leadership of nature amid the criticisms with which the physician is sometimes beset often demands qualities of a high order.

Who of us failed to regard with keen sympathy those of President Garfield's medical advisers who had won the confidence of our profession? . . . Our sympathy arose from the fact that such experiences, in kind, occur to every practitioner. They were seen to be simply more widely conspicuous because the magnifying lens of official position focused upon them a nation's regard. To meet such occasions requires clear judgment, kindly spirit, tact in dealing with friends or foes, ruled by a resolute purpose to control all means and influences available to restore the sufferer to health.

Furthermore, when we notice the agency of moral and social customs in the origin and spread of disease, we realize that the physician is called to a leadership of human nature, of the most extensive and decided character.

The spread of the contagion of scarlet fever, of measles, of small-pox, and venereal diseases, goes on not solely nor chiefly through its physical properties, but by reason of moral conditions, such as the indifference with which their presence is regarded, the absence or irresoluteness of efforts to check their dissemination, the selfishness which sacrifices the public weal to individual comfort, or the obstinacy of ignorance which will heed no council. Under the law of heredity we see disease tending to self-limitation through the feeble life and early death of its inheritors, but in the same human nature we see the passions, the mental affinities, and cravings, lead men to alliances which perpetuate the worst scourges of our race. To uncleanly habits we trace the conspicuous filth diseases; to the same source we trace the exciting cause, the intractable character, the wide diffusion, and fatal issue of a long list of other diseases. We find the germ of many ailments in social excesses. We also see the liberty of the press used, not only by its nobler representatives to supply our schools and households with pages made irresistibly attractive with their wealth of wholesome thought and artistic finish, but used also by certain "fellows of the baser sort," to make vice attractive, familiar, and fruitful in retributive suffering. We see, also, a large class of nervous disorders spring from overwork: overwork due to ambition to compete in professional or business life for the higher prizes of honor or money; or to the competition in manufacturing which lengthens the hours of labor beyond human endurance; or to the overdriving and overstraining of human energies to keep pace with the increasing speed and use of machinery, the rush of the locomotive, the spur of the telegraph, the incessant call of the telephone, through the perpetual day of the electric light, and too often through the three hundred and sixty-five days of the year, unbroken by the recreating calm and comforts and inspirations of the Christian Sabbath. Such facts not only illustrate the participation of a mental element in the production, the character, and the results of disease, but they suggest that the physician's duty is not limited to the control of the special cases of sickness he treats. A much broader field of labor, a much larger class of forces, awaits his efforts. I refer to all those measures by which a public sentiment favorable to the use of the best means for the prevention of disease is created and made operative.

The science of preventive medicine is of recent growth. But the knowledge it has already gathered brings with it a peculiar responsibility. As citizens we have duties whose character and sum is proportioned to our special knowledge. No man is fit to be a physician who is not a philanthropist in the best sense of the term. A true philanthropy will impel the physician to disseminate the facts affecting public hygiene. Under our form of government the enforcement of sanitary laws requires the consent of the governed. To gain this consent we must help the public to appreciate the increasing knowledge of sanitary rules. And if, in the execution of such benevolent intent, one should accept the invitation of some charitable society, or literary association, or educational institution, to instruct an audience in hygiene or expedients to meet the emergencies of sudden sickness or accident, let the way be open for him to do so without encountering the suspicion that he seeks advertisement and notoriety for the pecuniary returns they bring. The disgust created by the abuse of the press and the platform by traveling charlatans should not be allowed to abolish their legitimate use. When each member of this Society proves faithful to his opportunities to influence the opinion of his fellow-citizens concerning perils to life and health, which can only be averted by state and civil laws, with judicious Boards to enforce them, we shall soon see the people eager to release our State Board of Health from the crippling bonds which political fears cast around it, eager to restore it to its former efficiency as a help to our profession in imparting instruction, and in saving life, and ready to treat as sacrilege all future attempts to abridge its beneficent powers.

To proceed with the discussion of our theme, let us now notice that we should not allow the doctrine of our motto to obscure the truth, that we learn much more from themental work already done than from any direct personal inspection and manipulations of natural phenomena. We rightly think that personal observation and experiment furnish the very bone and muscle of useful medical knowledge. But they cannot form the whole body of a sound or practical medical education. . . .

Some after they have advanced a certain distance by the aid of books seem to forget their indebtedness to such sources of learning. They are overcome by the extra impressiveness of facts with which they have been personally connected, or by the flattery of successes which appear to indorse their guesses, or by pecuniary gains which too soon satisfy one with the sufficiency and correctness of his professional acquirements. In the discussion of medical questions with such men you find that they appeal to their experience for conclusive evidence upon all questions of diagnosis and practice. They appear quite intolerant of the notion that books can teach them more than their own observations of nature, although books contain the testimony of men whose acquirements, opportunities, and records of a hundred-fold more cases of a given disease than can come to the knowledge of the ordinary practitioner entitle them to speak with authority.

(To be concluded.)

RECENT PROGRESS IN OTOLOGY.

BY J. ORNE GREEN, M. D.

Schwartze[1] has now completed the account of his second series of cases of surgical opening of the mastoid. All of the histories are given very fully, even with the temperature charts where such were of importance; and we can only repeat with greater emphasis what was said in these reports at the completion of the first series of fifty cases, that never has a surgical procedure so early in its history been submitted to such a thorough and scientific analysis and study.

The ages of the patients were as follows: —

Between two months and one year	6 cases.
Between one year and ten years	23 cases.
Between eleven and twenty years	32 cases.
Between twenty-one and thirty years	20 cases.
Between thirty-one and forty years	4 cases.
Between forty-one and fifty years	7 cases.
Over fifty years	8 cases.
	100 cases.

Cured	74
Not cured	6
Died	20

The per cent. of cured is somewhat greater in the second than in the first series; the per cent. of deaths is just the same. The duration of after-treatment varied between one month and two years; the average duration of treatment was about eight months in the second series, and between nine and ten months in the first series. The average duration in the acute cases alone was nearly three months.

The cause of the failure to cure in three out of the six cases is positively asserted to have been merely an insufficient after-treatment.

Of the twenty deaths six were from meningitis purulenta, three from meningitis tuberculosa, two from abscess of the brain, one from phlebitis of the sinuses, one from pneumonia catarrhalis, three from tuberculosis pulmonum, two from pyæmia, one from anæmia, and one from epithelioma. In none of the cases in the second series could the operation be regarded as the direct cause of death. In one of the first series it was so undoubtedly, the dura mater being perforated by a splinter of bone, and death caused by traumatic meningitis. In the majority of the cases the histories show that the fatal disease had already set in before the operation, surgical interference being regarded as an *indicatio vitalis* to give the patient the benefit of the evacuation of pus.

From the whole series of cases Schwartze thinks himself justified in asserting that the mortality from the operation itself is very slight. The high per cent. of mortality is rather apparent than real, as many cases are included in which the death was certainly independent of the operation. Allowing all the cases where there was the possibility of a connection between the operation and the death, and adding the single case of traumatic meningitis, it is found that the mortality is reduced to six per cent. This mortality of six per cent. Schwartze considers, of course, as merely relative, since many times one hundred cases are necessary to get the absolute coefficient of mortality. It should, however, be remembered that these one hundred cases include every case presented, without selection or reservation, a number of the earlier ones being operated upon imperfectly before the details of procedure had been fully elaborated, and a number also were already suffering from advanced consecutive cerebral disease at the time of operation, which, in view of his past experience, Schwartze would now consider as beyond surgical interference.

Dividing the cases according to the conditions found, we have: —

(1.) Acute inflammation of the mastoid without external abscess, seventeen cases.

(2.) Acute inflammation with subperiosteal abscess or distinct fistulæ in the mastoid, sixty-two cases.

(3.) The external mastoid healthy, the operation performed on account of retention of pus in the middle ear, thirteen cases, the operation being regarded as an *indicatio vitalis*, seven cases.

The effect upon the hearing varies very much, and depends entirely upon the amount of destruction which has taken place from the original disease, and this is often very great. In seventeen of the cases, however, the hearing became absolutely normal. In thirty-three of the cases the cessation of the suppuration was followed by complete cicatrization of the defective drum-membranes.

DANGEROUS HÆMORRHAGES FROM THE EAR.

The close relations of the tympanum with several of the larger blood-vessels are well recognized as sources of danger in cases of carious perforation of the osseous walls of the cavity, but, fortunately, instances of serious hæmorrhages from these vessels are rare. Hessler[2] has collected some twenty-two cases of injuries of the carotid artery by disease in its passage through the carotid canal of the temporal bone; in nineteen of these there was serious, and in most fatal, hæmorrhage from arrosion of the artery. Böke[3] now adds two cases from his own practice in which there were fatal hæmorrhages, in one from the bulbus venæ jugularis, in the other from the sinus petrosus inferior.

The first case was that of a man, twenty-two years old, with chronic otorrhœa on the left side, of many years' duration, who entered the hospital on account of facial paralysis on the left. Treatment of the ear was begun, and the discharge was diminishing when, at the end of the first week, without known cause, there was a profuse hæmorrhage from the left ear, which, however, was checked by injections of cold water. During the next two weeks it recurred, and was again checked by cold water injections, when, at the end of the second week, there was a sudden bleeding, from which the man died. The autopsy showed the upper, anterior, and lower walls of the tympanum carious, the osseous wall of the Fallopian canal carious, and the walls of the bulb of the jugular vein destroyed and perforated. The fatal hæmorrhage came from the jugular, and apparently also from the arteria stylo-mastoidea.

The second case was in a sailor, forty-three years of age, who applied for treatment on account of bleeding from the ear. There had been otorrhœa of several years' duration, which, however, had not kept him from his work. The blood came from the tympanum, and was checked by the instillation of liquor ferri ses-

[1] Archiv für Ohrenheilkunde, xix. Vide these reports, Boston Medical and Surgical Journal, June 26, 1879, June 8, 1882; also November 23, 1876.

[2] These reports. Boston Medical and Surgical Journal, December 22, 1881.

[3] Böke. Archiv für Ohrenheilkunde, xx., p. 47.

quichloridi. Three days after entering the hospital an enormous hæmorrhage took place from the ear, from which he died in a short time. The autopsy showed the tympanic walls carious, the sinus petrosus inferior destroyed by caries, and communicating with the tympanum; from this vessel the fatal hæmorrhage took place.

Böke then calls attention to the fact that all the cases of serious hæmorrhages are preceded by long-continued otorrhœas, which have produced caries of the bone; and examination is often insufficient to determine the extent of this caries, and consequently from what vessels the bleeding proceeds cannot be decided with accuracy. On this account a profuse hæmorrhage from the ear is a very serious symptom. It is assumed that arterial bleeding can be recognized by the pulsating character of the stream, and by the bright color of the blood, while venous bleeding has the opposite characteristics; but if the hæmorrhage is of mixed character, as sometimes occurs, the diagnosis of the origin of the blood is impossible.

Three methods of treatment have been suggested for the bleeding: (1) the usual local medicaments for checking hæmorrhage, cold water, iron, alum, etc.; (2) digital compression of the carotid; and (3) ligature of the carotid. The two former should, of course, be tried, but Böke does not think there are certain indications for the last, and in fact says that for ligation of the carotid there is no scientific reason.

In support of this he says, very justly, that the diagnosis of the source of the hæmorrhage is doubtful, and then adds that in the three known cases in which ligation of the carotid was tried all three died from a recurrence of the bleeding. In this, however, Böke is wrong, as will be seen by referring to Hessler's paper,[1] for one of the three cases recovered from the ear trouble, but died two months after of tuberculosis of the lungs.

Reports of Societies.

REPORT OF THE THIRTY-FOURTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT CLEVELAND, OHIO, JUNE 5, 6, 7, AND 8, 1883.

PROCEEDINGS IN GENERAL SESSION. — FOURTH DAY, JUNE 8TH.

THE Association assembled promptly, and the session was opened with prayer offered by Rev. Charles Terry Collins. Business was then immediately commenced.

The following were appointed a committee on surgical service aboard steamers and other ocean vessels: Dr. A. N. Bell, of New York; Dr. A. L. Gihon, United States Navy; Dr. J. N. Quimby, New Jersey; Dr. H. O. Marcy, of Massachusetts; and Dr. Henry H. Smith, of Pennsylvania.

RESOLUTIONS, ETC.

DR. KELLER presented a resolution, that in the very near future, if not now, cremation will become a sanitary necessity in the large cities and populous districts of the country, and that the question be referred to the Section on Hygiene, which was done.

[1] Op. cit.

On motion of DR. BRODIE a series of resolutions, complimentary to the memory of the late Surgeon-General Joseph K. Barnes, were unanimously adopted.

Among other resolutions carried was one presented by DR. FOSTER PRATT, of Brooklyn, providing for the appointment of a committee of five to press upon Congress the desirability of securing better medical attendance on ocean steamers. Also the customary resolutions of thanks to the president, secretary, and treasurer, as well as to the local physicians and the citizens of Cleveland for their hospitality. Finally, DR. ATLEE, the president, said he had expected to have the honor of conducting to the chair the gentleman recently elected to fill the position — a man perfectly worthy of any honor they might bestow upon him, and one whom he had heretofore designated as the Laennec of America. He closed his remarks amid great applause, and introduced Dr. Lester, the second vice-president, who adjourned the Association until the next meeting in Washington, the first Tuesday in May.

MEETINGS OF SECTIONS.

SURGICAL SECTION. — FIRST DAY.

The section on surgery and anatomy, of which Dr. W. F. PECK, of Davenport, Ia., is chairman, and Dr. PAUL F. EVE, of Nashville, Tenn., is secretary, met at Case Hall.

Among the papers was one by DR. R. A. VANCE, of Cleveland, on a

RADICAL CURE OF HERNIA BY A NEW METHOD.

He minutely described the manner of an operation which he had performed in nineteen different cases of oblique inguinal hernia, always with the most satisfactory results.

The paper was referred for publication.

DR. DUDLEY P. ALLEN, of Cleveland, followed with a paper entitled

COMPARISON OF ANTISEPTIC AND NON-ANTISEPTIC METHODS OF TREATMENT.

His conclusions were as follows: It would seem, first, that the fact that the operations on the abdominal cavity succeed without the spray does not influence the employment of antiseptics in other operations where there is a continued oppo rtunity for infection. Second, it would appear that the spray is the least important of all the details in antiseptics, and that if the other details already mentioned are attended to, the proper dressing of wounds, pressure, and drainage may, by securing absolute quiet for a wound, turn danger into benefits. Third, that different methods are of different application, and that whereas the spray might be most desirable in opening joints and in the atmosphere of hospitals with hygienic surroundings, flooding might be equally efficient in certain other wounds, and that some prominent antiseptic, as iodoform, would be most serviceable when other antiseptics are inapplicable, as in the removal of the tongue. Fourth, that, although there are certain dangers in the use of antiseptics, these are more than equaled by the dangers attendant upon their omission, especially in large hospitals, and that dangers of poisoning are certainly decreasing as the application of antiseptics is becoming better understood; and, further, that investigation may develop a method of securing

antiseptic results less onerous and devoid of the disadvantages that now surround them.

The next paper, on the

VALUE OF EARLY AND LATE OPERATIONS IN MORBID GROWTHS, ESPECIALLY MALIGNANT,

was read by S. D. Gross, M. D., of Philadelphia. From it we make the following extracts: —

The fact is now generally, if not universally, admitted, that all morbid growths or tumors, whether benign or malignant, are of local origin. That the constitution in certain conditions, as when from any cause the general health is more or less seriously impaired, may predispose to such formations is not improbable, but that a neoplasm can be developed in any organ or structure of the body of a perfectly sound person, without some local cause, is what no enlightened pathologist of the present day believes or teaches. There is unquestionably occasionally a hereditary tendency to the development of morbid growths, both benign and malignant. We see this tendency, sometimes in a remarkable degree, displayed in warts and sebaceous cysts. Examples of the latter I have repeatedly witnessed in three generations, and instances doubtless occur in which this disposition manifests itself still further. Malignant diseases, as carcinoma and certain forms of sarcoma, occasionally betray a similar tendency. As many as three, four, or even five cases of scirrhus of the mammary gland have been noticed in as many different members of the same family. Epithelioma of the lip, skin, vagina, and uterus occasionally exhibits a similar freak.

All morbid growths are developed, directly or indirectly, under the influence of inflammatory action, the result of external injury, or, as is more frequently the case, of some mechanical obstruction, causing, in the first instance, congestion of the part, and this, in turn, incited action and inflammation, both leading sooner or later to abnormal cell-growth, cell-formation, or cell-development. It is in this way, and in this way alone, that we can satisfactorily explain those morbid growths, both benign and malignant, which, as the phrase goes, arise without any assignable cause. One of the most simple of all tumors, the sebaceous, is formed under the irritating influence of its own natural secretion, retained by the closure of its natural outlet. Obstruction of a lacteal duct is, there is no doubt, a frequent starting-point of scirrhus of the mammary gland. There is not a surgeon of any experience anywhere who has not occasionally met with cases of carcinoma, which were due, directly or indirectly, to the effects of local injury.

It is in vain to conceal from ourselves the fact that there are comparatively few reliable, ready, or trustworthy diagnosticians. Diagnosis is a high art, and it is not saying too much that the profession, as a body, are not sufficiently familiar with it to render it at all times, or even in a minority of cases, properly available at the bedside. It is, of all the arts in our profession, the one which demands the greatest amount of refined culture, experience, and tact, not culture, experience, and tact of an ordinary type, but of the highest possible type. Founded essentially upon a thorough knowledge of pathological anatomy, a branch of science little cultivated in any of our schools, and totally neglected in most, it is not surprising that the art of diagnosis should be so little understood by the generality of practitioners, and so many errors committed in the examination of morbid growths. If there is any one thing in the organization of our medical colleges more culpable, I had almost said more criminal, than any other, it is the exclusion from their curriculums of the study of pathological anatomy. Just in proportion as our knowledge of morbid structure is positive, accurate, and comprehensive will be the probability that we shall become skilled diagnosticians, and conversely. Hence, so long as this state of things exists, we shall look in vain for any marked improvement in this direction; and what is true in this respect is true alike of city and country practitioners, standing, as they do, upon the same unfortunate platform.

In carcinoma of the breast the honest and enlightened surgeon does not wait for involvement of the axillary glands or serious structural disease. He knows that the patient's safety, present and prospective, lies in the early use of the knife, and in thorough excision. He urges the importance of prompt interference, and assures the patient that, if the operation be properly done, it will probably eventuate in a permanent cure, or, if relapse occur, that there will be a comparatively long exemption from suffering. Everybody knows what the result of excision of the mammary gland in ordinary cases of cancer is; how rarely the disease is completely removed, and how few women live beyond eight, ten, or twelve months after such interference. In all such cases cancer cells have invaded the neighboring structures beyond the reach of the knife, especially as ordinarily employed, and serve as foci of new neoplasms. It makes one's very soul ache to see so many women doomed to endure the most frightful suffering in carcinoma of the breast for the want of a correct early diagnosis and the thorough ablation of the diseased structures. Of all the agony I have ever witnessed there is none at all comparable to that arising from this form of malignant disease of the mammary gland in its more advanced stages.

What has now been said is true alike of carcinoma, of sarcoma, and even of benign growths.

In all operations undertaken for the removal of neoplasms of whatever nature the golden rule is to perform the work as thoroughly as possible. If this cannot be done it is better in many cases, if indeed not in all, not to meddle with the growth at all, as such interference often only tends to light up increased activity not only in the abnormal structures themselves, but in the surrounding ones. In carcinoma the knife, as already repeatedly stated, cannot be employed too early. The longer it is withheld the greater will be the probability, not of relapse, properly so called, but of some of the cancer cells being left behind, buried out of sight, and thus serving as new centres of morbid action.

Dr. Henry A. Martin, of Massachusetts, followed in a paper on the

TREATMENT OF SYNOVIAL DISEASES BY A NEW METHOD,

in which he advocates the drawing off of the synovial fluid by aspiration, and the application of the rubber bandage. The figure eight turn is to be followed in treating the leg, and the spiral bandage on the arm.

SECOND DAY.

At 2.30 o'clock the Surgical Section met in the Opera House for the purpose of witnessing the Illustration of Anatomical and Pathological Papers, by Dr.

Alfred F. Holt, of Massachusetts. DR. WILLIAM A. BYRD, of Quincy, Ill., read a paper on the

EXSECTION OF BOTH HIP-JOINTS FOR MORBUS COXARIUS.

He said that since the first suggestion of the removal of the head of the femur for morbus coxarius there has been great change in opinion among surgeons in regard to the propriety of this operation. Formerly it was thought that while it might save the life of the patient it frequently left a miserably deformed being, incapable of locomotion without the aid of crutches or cane, and with chances of cure no better than if the patient were left to depend upon the slow process of spontaneous exfoliation of the diseased bone, — a process rarely accomplished before the death of the patient. Opinions, however, had greatly changed since the number of excisions had become numerous enough to compare with the older methods. The writer reported the case of a girl of ten years, who, after enduring the operation of the removal of the head and upper part of the femur, was in due time able to walk without crutches, passing up and down stairs with no difficulty. A photograph illustrative of this case was passed around the house for inspection. The time supervening between the attack and the excision of the first joint was about four months. The apparatus used after the operation consisted of an upright post, to which was attached a triangular frame made of strips of wood fastened together by strong strap-iron hinges and attached to the upright by means of a clamp. From the extremity of this triangle hung, suspended by a strong cord, the wire frame-work in which the patient lies, capable of adjustment to fit any desired position of the limbs. The triangular frame can also be adjusted at any angle, and is capable of being attached to a door-post, or any such convenient upright. The entire apparatus is very portable, and can be packed for transportation in a few seconds; while in this condition it occupies no more space than an ordinary violin box.

DR. H. O. MARCY, of Boston, read a paper on the

SURGICAL TREATMENT OF INTESTINAL OBSTRUCTION.

He stated that great triumphs had been achieved during the last decade in abdominal operations, and divided intestinal obstructions into three classes, — chronic, late acute, and early acute, — each of which might be caused by fæcal impaction, fibrous and cancerous structure, intussusception, injuries, etc. The speaker said that the first important thing was a prompt and correct diagnosis. He asserted that the aspirator could be used to relieve gaseous distention with almost absolute safety, and that its use is followed by relief, although only palliative and not curative. He mentioned the production of distention of the rectum by means of gaseous and liquid inflation, recommending, however, that no time be lost in resorting to an operation, as the location of the trouble cannot be accurately known. The median incision was advised.

Among the other papers in this section were one by Dr. Prewett, of Missouri, on A New Operation for the Cure of Ranula; Early Use of the Trephine, by Dr. Ranserhoff, of Cincinnati; Dr. J. H. Reynolds, of Michigan, on Stricture of the Urethra.

THIRD DAY.

PRESIDENT PECK called the meeting to order at two o'clock, half an hour earlier than the appointed time, and appointed a sub-committee on papers, consisting of Drs. McMurly, of Kentucky, Moore, of New York, and Parke, of Chicago, after which DR. ROBERT NEWMAN, of New York, read a paper on the

SURGICAL USE OF ELECTROLYSIS,

illustrating its use in the treatment of stricture of the urethra, for which he claims good results.

On motion it was decided to hear the paper of DR. JAMES R. TAYLOR, of New York, which was on the programme of to-day's exercises, but had to be read yesterday because of the doctor's contemplated return to his home in New York. Dr. Taylor's paper was entitled

THE TREATMENT OF THE FRACTURES OF LONG BONES,

and was profusely illustrated by a large number of well-executed engravings, which were distributed among those present. He first spoke of fracture of the femur, which he treats with a saddle made to fit into the perinæum, whereby he believes he secures the most perfect comfort possible by any apparatus used for the purpose of counter-extension. This little saddle is held in position by a strap running to the head-board on each side, thus securing the patient in an immovable position. By plaster extension secured to a screw arrangement in the foot of the bed he can produce any desired degree of extension of the limbs by simply turning the little screw at the foot of the bed, the chief advantage of the whole apparatus over all other instruments being the little saddle on which the patient sits, as it were, with comfort, he claims, rather than misery, as in most other methods. The author announced himself as positively opposed to the old method of using stones and other suspensory weights to produce extension of the limbs, and then turned his attention to the treatment of fractured ribs. He brings the broken ends into place by raising the arms over the head, an original method by which he claims there is no trouble in adjustment. They are then held in place by a band of adhesive plaster around the body.

DR. DONALD MACLEAN, of Michigan, who was to have read a paper on Cases in Practice, was absent, and had failed to send in his production. Dr. Taylor was therefore followed by DR. HENRY O. MARCY, of Boston, in a very able discourse on the Comparative Value of Antiseptics.

AMPUTATION BELOW THE KNEE-JOINT IN PREFERENCE TO "BRISEMENT FORCE" OR RESECTION IN CERTAIN CASES OF DEFORMITY WITH ANCHYLOSIS, ILLUSTRATED BY TWO CASES,

was the subject of an address by DR. LEWIS HALL SAYRE, of New York. Among other things he said: Certain cases of diseases of the knee-joint, unless treated with proper extension and counter-extension, result in more or less deformity, consisting of flexion and laxation of the leg backward. In this position the limb may become solidified or fixed. If the anchylosis is fibrous it can be broken up, and frequently results in the use of the limb and the use of the joint. If the solidification is bony and the limb of the same length as the other V-section through the angle of the deformity, an operation should be performed, and the limb straightened and anchylosed in this position. But in those cases where the disease of the joint has

taken place in early life and resulted in bony anchylosis and deformity, the limb below the joint grows much more slowly than the other, and, as after V-sections through the bone the limb does not grow, by the time the patient reaches adult life it becomes so short as to be practically useless. In these classes of cases amputation below the knee-joint is preferable when performed by a modification of Professor Smith's amputation at the knee-joint, Dr. Sayre preferring to saw through the head of the tibia rather than disarticulate at the joint. He also exhibited several photographs showing the condition of the stump seventeen days after the operation, completely healed, with the cicatrix entirely behind, and not subjected to the pressure of an artificial limb, as well as the limb applied in the standing and sitting posture.

In the absence of Dr. John H. Packard, of Pennsylvania, his Report of a Case of Reamputation at the Hip-Joint; Secondary Hæmorrhage on Sixth Day; Ligature of the Primitive Iliac Artery. was received and referred, without reading, to the Committee on Publication, after which Dr. E. M. Moore, President of the American Surgical Association, read a paper on the

TREATMENT OF OLD CASES OF COMPOUND DISLOCATION OF THE ULNA IN CONNECTION WITH COLLES' FRACTURE.

In cases of Colles' fracture there is also dislocation of the styloid extremity of the ulna, which dislocation in many cases is not reduced, and great deformity is the result. At any time before six months he rebreaks the united fracture, and attempts a reduction of the dislocation, but when the cases are of so long standing as not to permit of breaking the bone he excises the extremity of the ulna, thus making a useful and movable joint.

A brief paper on the

TREATMENT OF TENDER SPINES BY SUBCUTANEOUS INCISIONS

was read by Dr. V. N. Coffman, of Omaha, Neb.

SECTION OF "PRACTICAL MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY."

FIRST DAY.

Dr. J. H. Hollister, of Illinois, chairman, and Dr. J. G. Lee, of Pennsylvania, secretary. A paper on

YELLOW FEVER,

by Robert D. Murray, M. D., of the Marine Hospital Service, was read by T. W. Miller, M. D., of Illinois Hospital Service. The writer advised immediate taking to bed, administration of warm foot-baths, and suggested that if hæmorrhage should occur in the stomach, and not be vomited, it should be eliminated by the bowels. He laid emphatic stress on the necessity of absolute and constant quietude of both body and mind. The symptoms should be treated with the usual remedies, but with the utmost caution, in order to prevent nausea.

Prof. Henry F. Campbell, of Augusta, Ga., in discussing the paper, said that bleeding the patient was frequently attended with good results. A husband and wife were taken down with yellow fever. The woman vomited up blood and recovered, the husband could not vomit, hence he was bled. A pint of blood was taken from him, but it was not sufficient to save him. It should have been a quart. He did not advocate bleeding in all cases, as it was sometimes attended with bad results; but in the majority of cases the result was beneficial. The patient should be thoroughly vomited with hot water — a dozen glasses if necessary.

Dr. Elliott, of Pennsylvania, did not approve of bleeding; patients must be put to bed immediately.

Dr. Bell, of New York, approved the treatment given in the paper. Dr. Franklyn, of Ohio, favored repetition of calomel in place of bleeding. Dr. Elwell, of Cleveland, thought little was known as yet in regard to the causes of the disease. J. B. Hamilton, M. D., Supervising Surgeon of the Marine Service, recited instances which seemed to warrant the strictest quarantine at every outbreak.

The paper was referred to the Committee on Publication.

A paper on

MILK SICKNESS

was read by Dr. W. M. Beach, of Ohio, and discussed by Prof. A. B. Palmer, of Michigan, who thought the germ of the disease was multiplied after its entrance into the body.

SECOND DAY.

Dr. Thomas N. Reynolds, of Detroit, read a paper on the

ALIMENTARY CANAL IN BRONCHITIS AND PHTHISIS.

He said that the abnormal condition of the alimentary canal and portal and lacteal systems was often the predisposing cause of both acute and chronic affections in all parts of the respiratory apparatus. Speaking only of bronchitis and phthisis, acute tracheo-bronchitis was often caused by excess in the dietary with proportionately incomplete waste elimination. In view of this fact, in such cases the treatment should be prompt evacuation of the bowels and restriction of the diet to a light liquid form. Necessary quiet and warmth of the surface should be maintained, but the atmosphere of the room should not be too warm. The cathartic, hot drinks, and a warm surface produced a revulsion of nervous energy from the inflamed part to the bowels, kidneys, and skin. He deprecated the use of ordinary cough mixtures to the exclusion of this more rational treatment. Morphine, quinine, aconite, and veratrum viride were the more usually appropriate remedies in the first stage, but did not equal the treatment without drugs to which he referred.

Dr. W. F. Belfield, of Illinois, read a paper on the

GERM THEORY OF DISEASE, WITH MICRO-PHOTOGRAPHIC ILLUSTRATIONS,

for which, on motion of Dr. Austin Flint, Sr., of New York, a vote of thanks was awarded the author. The paper was then briefly discussed by Dr. Austin Flint, Jr., of New York, and Professor Palmer, of Illinois.

Dr. John V. Shoemaker, of Philadelphia, read a paper on the

MECHANICAL REMEDIES IN THE TREATMENT OF SKIN DISEASES.

The mechanical measures considered were massage, compression, blood-letting, incision, excision, enucleation, scooping, scraping, setons, and cauterization. On the subject of compression the writer said: —

"Compression is another very useful mechanical remedy, which should receive more attention from practitioners in the local treatment of skin diseases than is given to it at the present time. It can be applied by means of any substance which will afford rest and support to the affected structures. The means usually employed are muslin, linen, cotton, silk, and gum, used either alone and bound upon the parts, or arranged in the form of bandages, plasters, or the several materials combined together, and woven to the shape of the part to which it is to be applied. The use, in the first place, of the ordinary muslin lightly bound over the surface of many eruptive affections will not only give rest and support to the parts, but will also exclude them from the air, which often tends to keep up the active irritation."

THIRD DAY.

The Section opened its third day's session at the Euclid Avenue Opera House with a paper by DR. J. SOLIS-COHEN, of Philadelphia, entitled

ELEMENTS OF PROGNOSIS AND THERAPEUTICS OF LARYNGEAL TUBERCULOSIS.

"While acknowledging the truth that the prognosis is always bad in tuberculosis of the larynx," said the writer, "it may be maintained that it is less unfavorable in certain cases than others." After citing several cases he discussed a number of acute varieties occurring in his own practice, closing with, "I have reason to believe that the course of certain forms of tuberculosis of the larynx may be retarded to such an extent in occasional instances as to start the patient on the road to recovery." Practical illustrations followed, after which a vote of thanks was tendered the speaker, and his paper referred for publication.

DR. HENRY A. MARTIN, of Massachusetts, then delivered a lecture on

VACCINATION AND PROPAGATION OF VACCINE VIRUS.

The speaker recommended young heifers for physicians to procure vaccine virus from, not because they are cheaper, but for the reason of their perfect health. In the vaccination of the animals the skill of a physician is required. The quantity of virus that can be taken from an animal varies very much. It can be vaccinated only once upon each puncture. He said he introduced animal vaccination in this country, and would consequently like to see it successful. He did not speak against the use of vaccine from the arm of a patient, but said, owing to the enormous demand, it was utterly impossible to procure the desired quantity, and was a great temptation for dishonesty. The paper was discussed by DR. BACHELOR, of Rhode Island.

DR. A. T. KYTE, of Ohio, then read the closing paper on The Diminution of the Retardation of the Pulse in Aortic Insufficiency.

— That imagination may prove fatal receives fresh proof from a case reported in the *Medical Press*, April 25, 1883, by Dr. C. R. Francis. The patient, awakened from his sleep by something creeping over his naked legs, immediately jumped to the conclusion that it was a cobra, went into a state of collapse, and died, though it was discovered, even before death, that the supposed cobra was a harmless lizard.

ONE HUNDRED AND SECOND ANNIVERSARY MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY.

THE initial meeting of the Massachusetts Medical Society for 1883 was called to order promptly at twelve o'clock, noon, on Tuesday, June 12th, Vice-President DR. JOHN H. MACKIE, of New Bedford, occupying the chair. The meetings for this year were held in Huntington Hall, Boylston Street, a place not only more suitable and convenient than Horticultural Hall, but made delightful by almost perfect quiet and freedom from external noise, and agreeable coolness and airiness. The ante-rooms offered every convenience for the transaction of the financial business of the Society. It is to be hoped that the Society will permanently occupy this hall on similar occasions in future.

The first business in order being the reading of papers, the Vice-President at once introduced DR. H. C. ERNST, of Jamaica Plain, his subject being

A CONTRIBUTION TO THE STUDY OF THE TUBERCLE BACILLUS.

The paper was very interesting, and evinced considerable research, study, and experiment on the part of the reader. In the discussion which followed the reading remarks were made by DRS. WHITNEY, FITZ, and H. I. BOWDITCH. Dr. Ernst exhibited a fine specimen of the bacillus under the microscope.

The subjects of the second and third papers were identical, namely,

THE USE AND ABUSE OF ERGOT,

and the readers, DR. G. L. WOOD, of Springfield, and DR. W. A. DUNN, of Boston, gave very full information upon the history, therapeutical, physiological, and toxic effects of ergot and its alkaloids. These papers were not discussed.

At two o'clock the meeting was adjourned for one hour, being again called to order at three P. M. During the ninety minutes succeeding the following papers were read: Glykogen, by DR. J. W. WARREN, of Boston; Phlyctenular Disease of the Eyes, by DR. O. F. WADSWORTH, of Boston; Minor Injuries of the Spinal Cord, by DR. B. H. HARTWELL, of Ayer.

At 4.30 P. M. the Society adjourned to a room below stairs to listen to the paper of T. M. CLARK, A. B., Professor of Architecture, Institute of Technology, on

PLUMBING APPLIANCES.

This was an extremely interesting essay, made novel by a profusion of models of water-closets, sinks, washbowls, traps, and drainage appliances of every sort, illustrating the proper and faulty methods of plumbing, drainage, ventilation, etc. The closet for which Professor Clark expressed a preference was the "Harrington," a closet having no pan, the hopper and lining being one piece and composed of porcelain. It is ventilated by an opening at the back, two inches below the top, and connecting by pipe with an adjoining warm chimney flue. The gases which arise from below the hopper are thus carried away, and the air above the seat is drawn downward and into the back opening. Professor Clark suggested that this opening would be more effectual if made larger than in the Harrington model. There was a model in full size of the method of drainage now required by the

sensible City Ordinance for the regulation of plumbing. There were shown, too, soil pipes of lead, taken from some of our best houses, perforated in many places by the action of sewer gases. This was comparatively recent plumbing, but done before the introduction of iron drain and ventilation pipes, and showed in a startling manner the necessity of the only safe and proper arrangement of drainage.

At the close of the paper President Hosmer called for questions and remarks. None followed, but after the adjournment which then occurred, Professor Clark was detained for an hour by Fellows who were anxious to become informed as to the best methods of drainage. There could not have been a wiser or more practical means of acquainting the Society with the details of this vastly important subject. Neither could they have been more clearly demonstrated.

We refer to this matter more at length in another column.

A LADY DELEGATE.

During the day a female delegate, Dr. Alice Bennett, from the Pennsylvania State Society, listened to the proceedings. In the memory of the oldest Fellow this is the first female delegate ever received by the Society. It has been slyly hinted that her visit was procured by the friends of the woman-movement as an opening wedge, a means of preparation for what they hope will one day occur, namely, introduction of female practitioners into the Society.

The annual meeting of the Councilors was held at the Medical Library building at seven o'clock on Tuesday evening.

At the same place a conference of Censors was held during the forenoon.

The stated meetings of the Councilors will take place in Boston on Wednesday October 3, 1883, and on Wednesday, February 6, 1884, at eleven A. M.

THE MUSEUMS AND HOSPITALS.

During the afternoon of Tuesday the Warren Museum at the Medical College, the Warren Museum of Natural History, and the Museum of the Natural History Society were open to the inspection of the Fellows.

At ten A. M. the Fellows visited the Massachusetts General, City, the new Children's, and Lying-In Hospitals.

At the Massachusetts General Hospital the following operations were performed on Tuesday A. M. before the visitors: Dr. J. C. Warren did two amputations, one for disease and one for injury of the ankle-joint, in one of which he employed the "coat-sleeve" method. This consists in making a long circular flap and gathering the end together and tying with a tape passed through a cylinder, as described in *Braithwaite* for January by Dr. Richard Davy, of London. No drainage tube was used, likewise no dressing. The patient had but slight febrile disturbance on the following day. On loosening the tape in the evening only a small quantity of serum issued, and the tape was retied. The advantage of the operation is that there is no wound save the small rosette on the flap, and no dressing. It should therefore be very useful to country surgeons. Dr. Warren also performed the radical cure for hydrocele, and urethrotomy, in which he used Bigelow's divulser.

At the City Hospital the wards were visited.

Dr. Charles D. Homans amputated a scirrhous breast and extirpated a testicle.

Dr. Ingalls removed an epithelioma of the upper lip and opened a perinephritic abscess — a gumma.

ELECTION OF OFFICERS.

At the meeting of the Councilors the officers for 1883–1884 were elected. With the exceptions of Ira Russell, of Winchendon, as Vice-President, *vice* Dr. Mackie, and Dr. John Crowell, of Haverhill, as Orator, *vice* Dr. Johnson, Drs. J. W. Elliot and F. H. Hooper on Committee of Arrangements, *vice* Drs. Cutler and Bradford, Dr. F. C. Shattuck on Ethics and Discipline, *vice* Dr. Richardson, and Dr. W. L. Richardson on Medical Diplomas, *vice* Dr. Warren, the present board of officers was reëlected.

THE QUESTION OF ADMISSION OF WOMEN.

In the course of this meeting the inevitable subject of the admission of women to the Society was again brought up. Of the discussion, of the *pros* and *cons* received in reply to the annual postal-card questions to the Fellows, of the number who said "yes" and of the number who said "no" to these queries, nothing need be mentioned here. Suffice it to say that a vote being taken on the motion that Section I. of our By-Laws should be made to read "male and female," the result was sixty-two noes to fifty-eight ayes. The vote was taken by roll-call, and if the Suffolk District Councilors had but turned out as they should have done the noes would have been largely increased. Will this ghost ever be laid?

On Wednesday A. M. at 9.15 the one hundred and second annual meeting of the Society was called to order by PRESIDENT HOSMER.

SECRETARY'S REPORT.

SECRETARY GOSS read the records of the meeting of 1882: it then announced the names of Fellows admitted during the past year, about ninety in number; next read the names of Fellows deceased since the last meeting, twenty-seven in number, their average ages being $60\frac{19}{27}$ years.

FINANCIAL REPORT.

TREASURER DR. DRAPER then read the financial report. Income for 1882–1883 to April 1st, $8595.79; outgo, $7056.37; balance in treasury, $1539.42. The invested funds, amounting to $32,420.17, remain unchanged, and are paying four per cent. The treasurer announced that owing to the energetic action of district treasurers the list of delinquents was shorter than ever before, notwithstanding large accessions to the Society.

U. S. SURGEON-GENERAL'S OFFICE AND INDEX CATALOGUE.

DR. H. P. BOWDITCH then offered a motion that a committee of three be appointed by the chair to memorialize Congress in regard to the disposition and care of the Surgeon-General's Office, and urge upon our representatives the importance of providing a fire-proof building for its preservation, in connection with the Museum and distinct from the Congressional Library, and also of securing a liberal appropriation for the completion of the Index Catalogue and general purposes of the Library. Voted in the affirmative. The

chair appointed Drs. H. P. Bowditch, H. P. Wolcott and O. F. Wadsworth.

DR. MORONG, of the College of Physicians and Surgeons, then asked, in a somewhat lengthy address, for the recognition by the Society of the diplomas issued by his school. After considerable discussion it was discovered that the matter already lay upon the table at the Councilors' meeting, and would be called up at their next gathering. It was therefore decided to leave the subject as it was.

DR. HODGDON moved, and it was voted in the affirmative, that this meeting be adjourned to four o'clock P. M. of the Tuesday preceding the day of the next annual meeting. No Fellow but knew what *this* meant.

The Chair then introduced DR. E. N. WHITTIER, of Boston, as the reader of a paper on Recent Changes in the Method of Medical Instruction.

DR. J. S. GREEN, of Dorchester, next read an essay on Neurasthenia; its Causes and its Home Treatment.

A paper on The Early Symptoms of General Paralysis of the Insane was then read by DR. W. B. GOLDSMITH, of Danvers.

DR. J. W. SPOONER, of Hingham, read an essay on The Artificial Feeding of Infants. No discussion followed these papers.

DELEGATES FROM OTHER STATE SOCIETIES

were then introduced. They were: Dr. C. E. Webster, from Maine; Drs. J. J. W. Pray and L. J. Young, of New Hampshire; Drs. E. R. Campbell and George Dunsmore, of Vermont; Dr. G. F. Swarts, of Rhode Island; Drs. G. G. Hopkins, P. V. S. Pruyn, and E. U. Brush, of New York, and Dr. Alice Bennett, of Pennsylvania.

DR. SWARTS addressed the meeting.

After an intermission of fifteen minutes the orator of the day, DR. AMOS H. JOHNSON, of Salem, delivered the annual discourse.

ANNUAL DINNER.

At 1 P. M. the Fellows marched to the Skating Rink on Clarendon Street, to partake of the annual dinner. The cleanliness and freshness of the rink, its coolness as well, at the outset made it appear an excellent place for the dinner, and so far as that was concerned so it was. When the mental repast began, however, it was found that the irritating nearness of the Albany railroad, and the impertinent shrieking and puffing of the engines made unfortunate and trying breaks in the speeches, all of which were so spirited as to be well worth hearing. The arrangements left nothing to be desired, and the dinner was fairly toothsome.

The anniversary chairman, DR. FRANCIS H. BROWN, called the company to order, and grace was said by the REV. EDWARD A. HORTON, of the Second Church. After the expiration of an hour the chairman again called the meeting to order, and said: —

"Gentlemen, — It is the privilege of the Anniversary Chairman, acting for himself and the Committee of Arrangements, not only to spread these tables with food to nourish the body, but to furnish that mental food which shall cheer and comfort; to call out those expressions of feeling which shall make us, members of the medical profession, more united, and which shall draw our guests, from other walks of life, more nearly to ourselves.

"To you, Mr. President, and the officers and members of the Society, and to our honored guests, representatives of the nation and the State, of other countries, other States, and other professions, I extend a hearty, earnest welcome to our eighty-second annual dinner.

"Coming, as the members of this Society do, from all parts of the State, seeking our patients over the stony pavements of the cities or through the shaded roads of the country, where the waves beat on the sands and rocks of the eastern coast, or where the fine crepitus of the breeze is heard as it murmurs through the pines, we find the same broad ægis of Massachusetts over us. We rejoice together in a common society, and each year we are privileged to come together to join our hands in a common brotherhood.

"As I ponder in my mind what I may say to you at this time beyond the mere words of welcome suitable to this occasion, my thoughts constantly revert to the Roman numerals on our dinner ticket of to-day, — our eighty-second dinner — and I find myself going back over the long years to that day in June, 1802, when the first dinner, so far as is recorded, was partaken of. You can picture to your minds, as well as I can portray them, the forms of Holyoke and Rand, of Welsh, Jeffries, John Warren, and the others, men of limited means of medical education, but of stout hearts and ready hands, men to whom the study of medical science was a thing often of stealth and of the midnight hour, who felt it their duty, as we do ours, to wield the scalpel, that they might more deftly handle the bistoury, who by careful and faithful investigation of nature in her healthy and diseased conditions learned to lay their hands with more skill on the jarring strings of the human harp and tune them into harmony.

"As these men, the founders of our Society, sink beneath the load of years and their places are taken by younger men, I see them still, a long line of earnest, faithful workers, braving the storms of winter and the heat of summer, never sparing themselves so long as human suffering can be relieved. Men like these have lived and died, and to-day, as we meet on the one hundred and second anniversary of the foundation of our Society, we pay them our tribute of affection and respect. We are the followers of a noble line of ancestors, medical men of the old school, aye, as old as when the first child was born in the Garden of Eden, and our first parents ministered to the aches and ails of their children, — men of the new school, yes, a school which embraces every invention, discovery, and suggestion which can minister to the good of mankind from whatever source it came — so long as it proves worthy — down to the latest moment of recorded time.

"The Massachusetts Medical Society: Fortunate in the prudence and wisdom of its founders — upheld through a whole century by an unbroken succession of earnest, active, and able workers, never failing in its devotion to the welfare of humanity — it stands to-day and may it ever stand, as the faithful exponent of rational medicine."

To this toast the President, ALFRED HOSMER, responded as follows: —

"Mr. Chairman, — It seems as if this annual opportunity for a presidential message had never before occurred after so short an interval. But inasmuch as velocity is an element in momentum it is to be hoped that for our Society this rapid passage of time is associated in some way with a larger efficiency. The speedy return of this anniversary is all the more strik-

ing for the reason that the doctor's year is not twelve but fourteen months long. This statement may appear extravagant, yet it will bear close examination. For their own purposes the common vocations of life, taking a hint, perhaps, from the story of the creation, and not unmindful of all the injunctions of the decalogue, count six days in each week. The busy practitioner, exposed to ceaseless requisition, nocturnal and diurnal, with heavy contributions levied both upon brain and backbone, is forced to ignore the ordinary divisions of time, and the professional duties of fifty-two Sabbath days impose upon him fully eight weeks, or two months, of extra labor, and thus prolong his year to the extent which I have claimed. Perhaps this method of reckoning was adopted by that eminent and pre-eminently fortunate physician, an honorary member of the Society, the late Sir Henry Holland, whose plan of life included an annual vacation of two months, and thus secured to him for the purpose of rest the equivalent of every seventh day. Short as is the interval which separates these successive yearly unions they never lose their interest or their value. They appeal to that spirit which seeks, and always finds, pleasure in congenial association. They teach and excite curiosity upon that side from which springs the impulse that has its weakest expression in simple inquiry, and its highest in systematic, persevering investigation. They bring to us the opportunity of acknowledging with gratitude our great indebtedness to the past, and of studying together our obligations not only to the present but to the future. One of our chief debts is to the Society's founders, who are still so dear to us that only six years since one of the most eminent of them was represented in the person of his son at our customary festival. Their prudence and wisdom you emphasize. These conspicuous traits were in close relation. In their prudence they were wise. They had no substance they could afford to waste, and no chances for good they could afford to neglect. They knew much of life in narrow opportunities. Perhaps they had less of learning, as men of letters and science, than of experience as men of affairs. Their judgment was trained, corrected, and strengthened by the discipline of obstacle and hardship. Their wisdom was common sense under another name. They gave us a striking example of it in avoiding these utterances called promises, and in speaking only the honest and significant language of becoming deeds. The very nature of things occasionally compels one to resort to credit, and we may find it expedient to draw upon the future, and to replace an immediate duty with a remote one. Yet the whole system of promises has its adverse aspect. A promise is too often simply a compromise. It can never cancel a debt or extinguish obligation. It may occasion as well as cover a breach, and even may be safer in its breach than in its observance. Then let an honest and considerate caution be our rule. Excepting by our obligations to high and noble principles let us not be bound in the future, but rather reserve that freedom which will always enable us to act in the present, that is, under the light of the largest possible knowledge, and with ample views whose breadth and depth are fixed by our wisest men.

"As the exponent of rational medicine the Society holds a position of honor, responsibility, and difficulty. What is rational medicine? In general it is the embodiment of medical wisdom. It is not a discovery which comes at once to deal with that which is finished and complete; it is rather the result of a process of evolution, which, beginning with small and feeble perceptions, at last attains to one of the grandest views that medical observation and study have ever unfolded; it is allied to morality, for it is a full and honest confession of our many inabilities; it is allied to skill, for it represents the methods and the resources of our most accomplished collegians.

"The use of the term rational implies that there is something improperly called medicine which is not reasonable; which can give no better explanation of its being than the agency of assumption or the power of superstition, prejudice, and vicious tradition. The unreasonable form of medicine is a very prevalent one. The minds which accept and retain it become thereby more narrow and more sluggish; more and more difficult to reach by any logical process, or to impress by any scientific progress.

"Rational medicine owes its existence and development to men deep in thought, high in purpose, and broad in knowledge; it is the remainder left by the elimination of all not genuine and true; it makes no promises; it offers nothing for the gratification of credulity; its very simplicity may expose it to suspicion. Hence the difficulty of securing for it a universal recognition. But the difficulty will not discourage any brave and independent mind, nor change the earnest convictions which it holds. I propose as a sentiment, 'Medicine and reason;' alike in the fact that each ceases to be when it ceases to be rational."

Dr. A. H. Johnson, of Salem, the orator of the day, then responded to the next toast: —

"The orator of the day has recalled to us the seeming insufficiency of our Society's motto, and, while he would say with Milton in his Paradise Lost, —

> 'Accuse not nature, she hath done her part, —'

He would continue the quotation from the same author: —

> 'Do thou but thine, and be not diffident
> Of wisdom; she deserts thee not, if thou
> Dismiss not her, when most thou needst her nigh.'"

Dr. Johnson said that it seemed fitting that a society whose motto is "*Natura duce*" should be won to a hall dedicated to Flora and Pomona, with its memories of the freshness and fragrance of fruits and flowers; and that it seemed fitting that they should pass to hold their annual festival in a building dedicated to Apollo; for was not he the originator of the healing art and the father of Æsculapius? The speaker said that he believed that the time is not far distant when the present exemplary thoroughness of a Harvard medical education, which now seems like the light of an Argand burner compared with the farthing candle of its beginnings, shall pale its brilliancy before the electric light of its future influence, when it shall reënforce the example of the Johns Hopkins University in Baltimore by opening a medical course of at least four years to those who have had a special education of three years.

In conclusion he proposed the sentiment: "Massachusetts Medical Society: May its success hitherto in upholding its members to the rational practice of medicine increase with the means for higher rational education."

The next toast was the following: —

> "Harvardia! Harvardia!
> Nunc nomen conclamemus;
> Salvere te, florere te,
> Cluere te jubemus: —

"'The Harvard Medical School begins the second century of its existence with the occupation of a new building,'—thus begins the official description of that edifice,—and though the actual cautery, recently applied, came very near inducing a condition of acute inflammatory action which would have resulted in the complete disintegration of the whole system, we are rejoiced to know that the speedy application of cold baths quickly arrested the inflammation — and it is the opinion of the consulting corps that, with the judicious use of certain detergents, the throwing in of a due portion of iron and lime as strengthening agents, and perhaps the application of an alkaline wash to the external surface, will quickly restore the building to its former condition.

"Gentlemen, the new building of the Harvard Medical School will, within a few months, be justly the pride of the medical profession of Massachusetts. 'The new building' is on the lips of many of us today; they tremble on the lips of President Eliot as he now rises to speak to you."

In reply PRESIDENT ELIOT said: "I hope we shall make you all welcome to the new building next October. As I am not a physician, I am at liberty to say some things which need to be said, but which the modesty and reticence of the educated physician prevent him from uttering. From certain public discussions which have attracted popular attention during the past five months, it would be easy for hasty or ignorant people to infer that the medical profession was thoughtless of the poor, indifferent to their sufferings, and careless of their fate. Let me bear my testimony that the facts are all the other way. I believe that the medical profession in these days, in city and country alike, renders more direct personal service to the poor and friendless, for clear love of doing good and of learning to do more good, than all the other professions put together. Who give daily services without recompense to sick and wounded poor people in thousands of hospitals and dispensaries all over the civilized world? Physicians and surgeons. The poorest and most friendless man in this city knows that if he meets with a serious accident or is attacked by a grave disease he is sure of the prompt services of the most skillful surgeons or physicians in the community as soon as he is carried to a hospital. Who care tenderly for friendless mothers, sick children, and deserted infants, patiently exerting their best skill to save life, mitigate suffering, and restore health? The physicians of lying-in-hospitals, children's hospitals, and infant asylums. Is it the lawyers who have learned at last how to bring up motherless babies successfully? No, sir, it is the physicians. Who established in Boston those admirable nurseries for babies of the poor working women? It was young physicians, not long out of the medical school. To whom does society owe it that every insane pauper is more humanely and rationally treated to-day than the king's daughter would have been, if insane, two centuries ago? Not immediately to the doctors of theology, or of law, but to the doctors of medicine. Who has delivered modern society in great measure from those horrible plagues and pestilences, like the black death, the small-pox, and the Asiatic cholera which periodically desolated Europe but a few generations ago? The medical profession. This immense service has not been rendered for pecuniary rewards, or to the rich and great alone, but freely to the poor and humble, and chiefly to them. Indeed, gentlemen, if there are any portions of modern society which have especial reason to be grateful to the medical profession for services already rendered, and to promote the advancement of medical science and the improvement of medical education in the sure hope of still greater benefits to come, it is the poorer and less educated portions. They have more need of medical and surgical aid than the well-to-do, for their exposures are greater. It is for them to insist in their own interest that what his excellency the governor has felicitously described as 'the decent and humane provision of the statute' concerning anatomical science be made effective to the end in view. Let them not imagine that the educated physician, whose whole life is given to the study and service of the human body and to the alleviation of human suffering, can be without reverence for that body or without sensibility to that suffering. Let them be assured that the improvement of the science and art of medicine is for the common interest of all conditions of men. Even in the present imperfect state of medical science and education it is a rare family, rich or poor, prosperous or miserable, which has not owed the life of at least one of its members to the skill and courage of some good physician. Even now hardly a man or a woman reaches the meridian of life without having owed relief from agony or escape from untimely death to the medical art. From the achieved progress of the past hundred years what may we not hope of the coming? It is for all classes of the community to further to their utmost the development of medical knowledge and skill. That way lies the path of mercy, statesmanship, and reverence for humanity."

The CHAIRMAN then introduced the next speaker in the succeeding words:—

"The amateur astronomer of our own Society who, many years ago, made the happy discovery concerning the dome of the State House on Beacon Hill, the fame of which has encircled the world, little dreamed at that time that another son of Harvard, one of the class of 1844, would be summoned from our midst to take an important position as the director of the Astronomical Observatory of the Argentine Republic. We name him doctor, and as such he passes the portals of our hall to-day, but he is Philosophiæ Doctor of Göttingen, not of medicine, and this is but one of the many honors which have been showered on him.

"Dr. Gould can tell us of the Southern Cross, of the phosphorescent clouds of Magellan, and the great constellation of the ship. Let me not keep him longer from you, but introduce Dr. Benjamin Apthorp Gould."

DR. GOULD has spent the last thirteen years in South America, and spoke of the joy of reaching home again. He said that since leaving Boston fire had swept over one half of it, and the march of improvement over the other half, so that one does not even know the street he went from home to school on. He spoke of the rich flora of South America, and of the many plants there yet to be utilized by the medical profession. The speaker said the medical was the first of the learned professions. If there were but one learned profession it would not be that of theology, for our consciences lead us to adore and reverence; nor would it be the law, but it would be the one profession which requires experience, and thought, and investigation.

Rev. Edward A. Horton was then called upon:—

"The members of this Society will recall with grate-

ful remembrance the name of David Rand. You will bear in mind that he was one of the petitioners to the Legislature for the incorporation of this Society, our President from 1798 to 1804, and ever zealous and faithful in its interests.

"Dr. Rand was an attendant at the ministrations of the Second Church in this city, a church whose foundation dates back to 1649, the church of the Mathers, of Lathrop, of Ware and Emerson, among whose worshipers have been John Ware and J. B. S. Jackson, and one still living and respected, Dr. Charles Ware. The pastor of the Second Church is with us to-day, and I take pleasure in presenting him to you in the person of Rev. E. A. Horton."

MR. HORTON said: —

"Friends of the one necessary profession, you do me great honor, coming as the member of a supernumerary profession. I am glad to look upon these faces, which not only represent intelligence but leadership. You are bound to be decisive, quick, like generals on the battle-field." He spoke of his life having once been saved by the exertions of Dr. Bowditch, and said that the clergy could learn many lessons from the medical profession, one of which was, if he understood their rational school, that they treated each case as an individual case rather than depend upon general laws, and that heretofore the church had treated men in bodies rather than as individuals. In condemning sinners the clergy had not taken sufficient note of hereditary tendencies. Physicians endeavor to aid nature, and to arouse the latent energies of man's physical system. So the clergy should do as to the spiritual part of man. He asked that they might work together so as to develop a sound mind in a sound body, and bring the kingdom of God on earth.

The CHAIRMAN then said: —

"In a message sent to the first Congress Washington said: 'There is nothing can better deserve your attentive patronage than the promotion of science and literature. Knowledge is, in any country, the surest basis of public happiness.' The Institute of Technology has judiciously blended science and literature, and, under the good care of President Walker, is nobly maintaining the stand it has held for many years.

"Gentlemen, if the Census Bureau could not get along without General Walker neither can we. We have been the guests of the Institute of Technology. It is our pleasure to welcome President Walker and Professor Clark. Now let me introduce President Walker."

PRESIDENT FRANCIS A. WALKER spoke on behalf of the Institute of Technology. He said: "It has afforded the government great gratification to receive within its doors the Massachusetts Medical Association. We feel that our halls and offices are honored by the presence of eight hundred members of the noblest of the professions in the noblest of the Commonwealths of the Union. You have been heartily welcomed, gentlemen, with us, and you will be welcomed if you choose to come again."

Introducing Dr. W. H. Hingston, of Montreal, DR. BROWN said: —

"Our medical brethren in Canada; speaking the same tongue, engaged in a common calling, they are separated from us only by an invisible line."

DR. HINGSTON paid a high compliment to the skill of some of the members of the Society, and contrasted a pleasant trip he had taken down the harbor with an incident when it was attempted to infuse a large amount of tea there. Although a British subject he felt that it had been proved that the tea had done a great deal for the benefit of the human family. He had, since his arrival in the city, spent considerable time in inspecting the hospitals, and he had been very agreeably surprised, he said, with the excellence of these institutions.

The CHAIRMAN then said: —

"I learn from an article in Appleton's Encyclopædia for 1879 that at a meeting of the Boston Marine Society, held October 12, 1790, the following vote was passed: 'That a committee be appointed to consider what spot of ground may be the most convenient for the erection of a marine hospital.' . . . That in the year 1798 and, perhaps, as a result of a memorial presented by the same society, an act was passed by Congress charged with the duty of preserving the health interests of the officers and seamen employed on American vessels. That was the origin of the Marine Hospital Service as it stands to-day, a service which cares for sick and disabled seamen in every coast and inland port of the United States, with a staff of surgeons appointed, each one of them after a rigid competitive examination, in which eighty per cent. fail of being received, with a *clientèle* of 170,000 seamen, and treating nearly 40,000 patients annually, and this without calling on the government for a dollar of its money. He then called upon DR. JOHN B. HAMILTON, surgeon-general of the Marine Hospital Service, who said: —

"Mr. Chairman, I thank you for your complimentary introduction, and your friendly mention of the service, but, sir, I feel that the Marine Hospital Service needs no introduction to the Massachusetts Medical Society. It was born here, and I hope you will pardon me if I say that if Dr. Scollay, Captain Deblois, and the other departed worthies were alive they would have no reason to be ashamed of their progeny. Why, sir, it was yonder on Castle Island that Dr. Thomas Welch treated merchant sailors eighty-five years ago, and the hospital instituted at Charlestown five years later has been carried on by Fellows of this service nearly ever since. I ought to mention some of the older names, not only out of respect to their memory, but as a testimony to the record of faithful service they have left behind. When Congress finally took action on the petition of the Boston Marine Society, and founded this service in 1798, Dr. Thomas Welch, who had served with distinction during the Revolution as a surgeon, had a contract for attending the troops then stationed at Castle Island in Boston bay. His name was suggested to the President by Gen. Benjamin Lincoln, then collector of the port, as a suitable person to inaugurate the service, and he was accordingly appointed, and all sick sailors were sent there until the first hospital was built, which was on the Mystic River side of the navy yard at Charlestown. Dr. Charles Jarvis was then appointed physician in charge (in 1803), and served until 1809, when he was succeeded by Dr. David Townsend. Dr. Townsend served until 1829, when he died, after twenty years' service, and was succeeded by Dr. Charles H. Stedman. I need not mention the Fellows of the Society who were subsequently identified with the service at this port, for all know them. Two who served "before the war" are still living to "tell the tale" themselves, and they with the others have left the records of their triumphs, together with those of the occasional

failures that all must meet, on file at the old Chelsea Hospital for the instruction and guidance of the new comers."

"I would not weary you, Mr. Chairman, by giving detailed evidence of the faithfulness with which the Fellows of this Society wrought their humanitarian work in the service; that is sufficiently attested by the fact that the present strength of the service is due as well to the services of the medical officers of the past as to the continuation of their work by the officers of to-day."

The next speaker was called upon as follows: —

"The next specimen I shall put on the table is a gentleman of large angular aperture; he has a binocular eye-piece, and very finely mounted objectives; he has excellent defining power, and good resolution; he has no coarse adjustment; he bears the stamp, "Bolles, Salem;" he has a degree Philosophiæ Doctor, and is also a Microscopiæ Magister."

The REV. E. C. BOLLES, Ph. D., of Salem, responded very happily.

The CHAIRMAN offered the following tribute to Oliver Wendell Holmes: "Dear to us all, fellow-members, is the name of Holmes. He it was — our poet, anatomist — who led so many of us from the alphabet of the connective tissues and the foramina at the base of the brain, which we have never ceased to remember to this day, to the complicated layers of the muscles of the back, which he knew none of us *could* remember, and which we duly forgot the day after our examination. To-day he is with us in life, a living example of his own words: —

> "'Age lends the graces that are sure to please;
> With hand and heart as warm as in days gone by; aye,
> Where the snow-flakes fall thickest
> There's nothing can freeze.'

And we heartily join in the decision of our university in placing him in the honorable position of Professor Emeritus — Emeritus quia meruit."

The Chairman then read the following sentiment, which had been sent by Dr. Holmes, with his regret that he was unable to attend the meeting of the Society: —

"The Massachusetts Medical Society — May its members always, and all of them, bear in mind that medicine is a science, as well as an art and a means of getting a livelihood, and that all its alliances should be made with due respect to the stern and uncompromising demands of the august sisterhood of the true sciences, as well as to the convenience or kindly instincts of the practitioner."

PROFESSOR MORSE replied pleasantly to the following introduction: —

"Within a few days a professor in the Essex Institute at Salem has returned to our shores after a long sojourn in Japan and Java. Whether he has devoted himself in those far-off countries to the subject of brachiopods, a branch of science in which he is justly eminent, or whether he has been traveling for the purpose of increasing his already large collection of pottery, I do not know. I will ask Prof. Edward S. Morse to let us hear what he knows about either of these subjects, or what he may have picked up of interest while abroad."

The CHAIRMAN read letters from Sir James Paget, Dr. H. W. Acland, Mr. William Bowman, and Dr. Samson Gamgee, of England, Professor Verneuil, of Paris, and Dr. Joseph Sapolini, of Milan.

Letters had been received from Drs. John C. Dalton, Austin Flint, and Fordyce Barker, of New York, Dr. S. Weir Mitchell, of Philadelphia, Drs. John T. Gilman, and F. H. Gerrish, of Portland, Me., Dr. E. T. Caswell, of Providence, R. I., Surgeon-General Crane, United States Army, and Surgeon-General Wales, United States Navy, Dr. W. N. Wickwire, of Halifax, N. S., Hon. George F. Hoar, of Worcester, Hon. George M. Stearns and Hon. George D. Robinson, of Chicopee, Hon. George William Curtis, of New York, Hon. R. M. Morse, Jr., of Boston, Hon. Theodore Lyman, of Boston, Judge Charles Devens, and Judge Oliver Wendell Holmes, Jr., of the Supreme Court, Prof. J. P. Cooke, of Cambridge, Dr. George B. Loring, of Washington, Hon. Henry K. Oliver, of Salem, Henry P. Kidder, of Boston, and many others.

Thus terminated an occasion of more than usual spirit and interest. About 750 Fellows were present.

MASSACHUSETTS MEDICAL SOCIETY.

COUNCILLORS' MEETING.

A VERY fully attended meeting of the Councilors was held in the hall of the Medical Library, Boston, on Tuesday, 12th inst., at seven o'clock P. M., PRESIDENT ALFRED HOSMER, of Watertown, in the chair.

REPORTS OF SECRETARY, TREASURER, ETC.

The secretary, DR. GOSS, reported the names of new and of deceased Fellows, and the treasurer, DR. DRAPER, presented his annual report, which, having been certified to by the Auditing Committee, was accepted. The total income of the Society during the past year has been $8595.79; expenditures $7056.37, leaving a balance on hand of $1539.42. In accordance with the recommendation of the Finance Committee it was voted that $1308.50, being eighty-five per cent. of this balance, be distributed among the district societies.

The Committees on Membership, Publications, and on By-Laws of district societies presented reports, which were accepted.

REGISTRATION OF BIRTHS AND DEATHS.

The committee to which was referred the petition from Berkshire District Society concerning registration of births and deaths reported through its chairman, DR. AMORY, that its members petitioned the Legislature in the name of the Society to repeal or amend the statute, and requested a hearing. A hearing was granted at which the committee presented a strong argument against the injustice of the statute, which affixes a penalty for non-performance of clerical work which the Commonwealth paid nothing for. The committee requested that physicians (and midwives) be allowed a fee for each birth reported, or else that the compulsory duty be abrogated.

The Judiciary Committee of the Senate who heard the petitioners were favorably disposed to recommend the request for a fee, but were averse to granting a repeal, and were also indisposed to grant a fee for reporting deaths. Inasmuch as the attending physician is required to report a death only when applied to by a member of the family of the deceased this request was not pressed.

The act as amended by the Legislature is as follows: —

CHAPTER 158. An Act in relation to the Returns of Births by Physicians and Midwives.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows: —

SECTION 1. Section seven of chapter thirty-two of the Public Statutes is amended so as to read as follows: "Section 7. Physicians and midwives shall, on or before the fifth day of each month, report to the clerk of each city or town, except Boston, a correct list of all children born therein during the month next preceding, at whose birth they were present, stating the date and place of each birth, the name of the child (if it has any), the sex and color of the child, the name of place of birth and residence of the parents, and the occupation of the father. The fee of the physician or midwife shall be twenty-five cents for each birth so reported, and shall be paid by the city or town in which the report is made.

SECT. 2. This act shall take effect upon its passage.

Approved May 3, 1883.

ELECTION OF OFFICERS. NEXT MEETING. STANDING COMMITTEES.

The Committee on Nominations, through Dr. Shattuck, reported a list of candidates for the officers of the Society, and the same were elected: Alfred Hosmer, Watertown, President; Ira Russell, Winchendon, Vice-President; Frank W. Draper, Boston, Treasurer; Charles W. Swan, Boston, Corresponding Secretary; Francis W. Goss, Roxbury, Recording Secretary; David H. Hayden, Boston, Librarian; John Crowell, Haverhill, Orator; Robert Amory, Brookline, Annual Chairman.

Voted, That the next annual meeting be held in Boston on the second Wednesday in June, 1884.

The following Standing Committees were appointed: —

Of Arrangements, C. E. Wing, A. T. Cabot, H. C. Haven, C. H. Williams, J. W. Elliot, Frank H. Hooper.

On Publications, G. C. Shattuck, R. M. Hodges, B. E. Cotting.

On Resignations, J. Ayer, F. Minot, D. W. Cheever.

On Finances, C. D. Homans, W. W. Wellington, B. S. Shaw.

To Procure Scientific Papers, C. W. Swan, F. K. Paddock, G. S. Stebbins, J. R. Chadwick, R. H. Fitz.

On Ethics and Discipline, G. J. Townsend, G. E. Francis, A. H. Johnson, C. Howe, F. C. Shattuck.

On Medical Diplomas, W. L. Richardson, A. H. Cowdrey, E. J. Forster.

MEETINGS OF DISTRICT CENSORS.

DR. A. N. BLODGETT presented a petition from the General Censors' Meeting, stating that, in the opinion of that body, the Boards of Censors for the District Societies are at liberty to hold special meetings at their pleasure, whether for the examination of candidates or for any other purpose within their functions, and expressing the hope that the Councilors would take favorable action thereon.

Voted, That the communication be referred to Drs. E. H. Bradford, A. N. Blodgett, and J. T. G. Nichols as a committee, to report at the next meeting.

THE QUESTION OF ADMISSION OF WOMEN.

DR. HODGDON offered the following: —

Voted, That the first four lines of By-Law I. be stricken out, and the following be put in their place, viz., Candidates for admission into the Massachusetts Medical Society may be either male or female; and every candidate must, by proper credentials and examination, satisfy the Censors of said Society that he possesses the following qualifications for fellowship: —

A very animated discussion ensued on the presentation of this motion.

DR. WILLIAMS said he was unwilling that the Council should take favorable action on something which contravenes the charter and involves the harmony of the Society, the good of its members and of women also. Circulars had been sent to and replies received from many members; but, is asking questions a proper way of discussing an important matter? The public has rights and so has the Society, but what is either to gain by the admission of women to the latter? Even its advocates admit they believe that women should not practice medicine. They are not fitted on a question of strength. For several years, at the critical period of life, they are disqualified. There are 178 towns in the Commonwealth where there are no resident practitioners. Will women go to such places where there is no male practitioner on whom they can rely? Have they shown any fitness for the profession, any place they can fill, or contributed anything to science? They are failures as practitioners. The British Medical Association having admitted one woman, then closed its doors to all other females. Many members say they desire the privilege to consult with women. The Society does not deny them the privilege to consult with such as are properly educated and not guilty of practices forbidden to Fellows.

The harmony of the Society will be immensely disturbed by the adoption of the proposed amendment.

DR. HODGDON said that By-Law I. prescribes accurately the qualifications for admission. He discarded all sentiment. Right and duty should decide us. The Society was chartered not for doctors but for the benefit of the community — to discriminate between such as are properly educated and qualified, and those who may ignorantly and wickedly administer medicine.

DR. BOWDITCH vehemently protested against what had been said in opposition to the resolution. Twenty-five years ago one woman desired to be examined by a committee to see if she was qualified for admission to the Society, and promised, if she was found deficient, she would study until she was fully fitted for membership. It is a question simply of right.

DR. SHATTUCK argued that the Society was chartered for men only. By admitting women we shall proclaim that they are equally qualified with men to practice medicine. There are many members to whom the presence of women at the meetings would be positively objectionable.

DR. H. P. BOWDITCH stated that the fear of violating the charter by the admission of women is groundless. Judge Hoar has decided thus: It is useless to discuss whether women ought to practice; they do practice. The Society will gain in the esteem of the public by the admission of women.

DR. HARVEY said it seemed to him absurd that

every year this matter should be brought up. When women shall have petitioned to become members it will be time enough to consider the question. He characterized the pamphlet which had been circulated a year ago, and is again put before the Council to-day, as false in some of its statements. Even if the resolution were passed, how could Censors examine female candidates, as none of the schools from which they have diplomas are on the list of recognized medical colleges. Is there a member of the Council who would wish his wife, daughter, or sister to become a practitioner? Are we ready to favor in others what we believe to be unfit for them? Is it well for the Massachusetts Medical Society to say *yes* to what nature has said *no*?

DR. HODGDON replied that in two or three instances to his knowledge women had applied to be admitted to the Society.

On motion, it was voted that the question be decided by ayes and noes.

On calling the roll 120 Councilors responded to their names. The motion was defeated, fifty-eight in the affirmative, sixty-two in the negative.

At 9.15 P. M. the meeting adjourned.

NEW YORK MEDICO-LEGAL SOCIETY.

AT a meeting held June 6th the REV. HEBER NEWTON read a paper on

THE OBLIGATIONS OF SOCIETY TO THE INSANE,

in the course of which he said that the treatment of the insane was not a matter which concerned the medical profession alone, but also the public at large. Insanity was the disease of civilization, and, notwithstanding the fact that it was so common a calamity, it was the one disease which most opened room for the maltreatment and abuse of those suffering from it. Society owed a solemn duty to these unfortunates, and there was need for the incessant vigilance and scrutinizing inspection of the State in order to prevent abuses. Private homes for the insane should be made open to the same official inspections as the State asylums, and there should be a better system of inspections for such institutions in general than that which now to a great extent prevailed. There should be the greatest possible freedom given to inspectors, such as the privilege of going through asylums at all times and without any previous announcement; formal visits of inspection being of no service. There should be female visitors for the women's wards just as much as female nurses, for the worse an outrage was, the less willing would a woman be apt to make complaint of it to a man.

There was room in this movement for reform in the treatment of the insane for all who had any influence whatever in the community, and there were two things which seemed to him to be essential to any permanent success in the matter. The first of these was reform of the civil service, and he believed that when public positions were divorced from professional politics the administration of such grave and delicate trusts of government as the care of the young, the poor, the sick, and the insane would be attended with incalculable benefit to the community. The second essential, he thought, was the provision of an ample number of properly trained nurses in all asylums, public or private. If trained nurses were beginning to be regarded by physicians as essential to the proper care of the ordinary sick, how much more was this required in the care of the insane? Attendants in these institutions required a special mental and moral training to fit them for the adequate performance of their difficult and responsible duties, and the means should be provided for their thorough instruction.

The second paper of the evening, on

MECHANICAL RESTRAINTS IN THE TREATMENT OF THE INSANE,

was read by DR. ALICE BENNETT, medical superintendent of the female department of the Pennsylvania Asylum for the Insane at Norristown, Penn. She said that she had charge of about eight hundred patients, and that she had abolished all forms of mechanical restraint in her treatment, even in the case of the most violent patients. This plan had been followed by very gratifying success, and she related a number of instances to show the subduing influence of kindness. Among those who took part in the discussion of the papers were DRS. CHADWICK, O'SULLIVAN, MANN, STILES, and GUNNING, EX-JUDGE DELANO C. CALVIN, and MR. CLARK BELL, President of the Medico-Legal Society.

Recent Literature.

Officieller Katalog der Allegemeinen Deutschen Ausstellung auf dem Gebiete der Hygiene und des Rettungswesens. Protectorat J. M. DER KAISERIN-KOENIGIN AUGUSTA. Berlin. 1883. Th. Fischer: Cassel. Julius Springer: Berlin.

Official Catalogue of the General German Hygienic Exhibition. This gives a short account of the origin of the exhibition, with a description of the building and grounds, lists of officers and committees, and rules and regulations for the exhibitors. Then follows a detailed list, arranged in systematic groups, of all the objects exhibited, with the names and addresses of the exhibitors. It also contains a folding plan of the building and grounds.

Pocket Therapeutics and Dose Book. By MORSE STEWART, B. A., M. D. Third Edition. Detroit: Geo. D. Stewart & Co. 1882.

This small work can do good service as a reminder, and certainly contains a very unusual number of useful things.

The Untoward Effects of Drugs. A Pharmacological and Clinical Manual. By DR. L. LEWIN, Docent in the University of Berlin. Second edition, revised and enlarged. Translated by J. J. MULHERON, M. D., Professor of Principles of Medicine, Materia Medica, and Therapeutics in the Michigan College of Medicine, Detroit. Detroit, Michigan: George S. Davis.

A second translation of this excellent work, with the author's consent, has been made. It is essentially the same work which was published last year by William Wood & Company, and was then reviewed in these columns. It will prove interesting and instructive, as it contains many practical suggestions.

Medical and Surgical Journal.

THURSDAY, JUNE 21, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number; $5.00 a year, including postage.*

All communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

Subscriptions received, and single copies always for sale, by the undersigned, to whom remittances by mail should be sent by money-order, draft, or registered letter. HOUGHTON, MIFFLIN AND COMPANY,
No. 4 PARK STREET, BOSTON, MASS.

THE PROTECTION OF MAN IN MALARIOUS COUNTRIES.

THIS is a question of deep general interest and of increasing local importance in some of the most accessible and attractive portions of our own States. In Italy, as is well known, the question of rescuing large and famous portions of territory from this scourge, or of protecting their inhabitants from its degenerative influences has become, since the resumption of sound finances, almost the most vital with which the government has to deal, and only government machinery can grapple successfully with a problem so vast, and involving so many conflicting private interests.

Signor Crudeli, who, with Klebs, has for several years been studying the malarial poison and seeking to discover its active principle and precise habits more exactly than these have hitherto been defined, is a member, and an active and influential one, of the Italian Parliament. Largely through his zeal the Ministry of Agriculture, of Industry, and of Commerce has been led into its efforts to combat malaria in Italy. A few months since Crudeli presented a report to the minister of the above departments containing the results of his researches with regard to rendering the Roman Campagna healthy.

The last number of the *Italian Archives of Biology* contains the portion of this report relating to the protection of populations inhabiting countries still malarious. As a measure of prophylaxis in malarious districts Crudeli confirms the value of perpendicular elevation above the malaria-breeding soil, especially in the early morning and late evening. Malaria will reach a considerable altitude if carried by lateral currents of air along a somewhat inclined plane, but cannot reach a perpendicular elevation of fifteen or twenty feet. Experience taught this long ago to the inhabitants of strongly malarious regions, and hence the habits of swinging hammocks in trees, of supporting platforms upon tall poles, of surrounding dwellings having paved court-yards with high continuous walls so that the air of the rooms is renewed from the atmospheric layers on a level with the roof.

The use of the Cottois respirator is also found to be attended by a certain amount of success, though it is by no means an entirely reliable safeguard. The alcoholic preparations of the eucalyptus are said to be almost valueless where the malarial poison possesses any energy.

On account of its cheapness and promise of success Crudeli experimented with arsenic upon quite a large number of individuals exposed in malarial localities. By the coöperation of the railway lines and their officials he was enabled to gather more reliable results than could have been reached under ordinary circumstances. The dangers and uncertainties of the administration of arsenic were avoided by using thin gelatine tablets divided into little squares, which can be separated from each other as are postage stamps, each square containing a fixed amount — in these experiments two milligrammes — of arsenic. The treatment began with one of these squares daily, and as a rule a maximum of four was reached in four days. The results of the use of arsenic in this way as a *prophylactic* against malaria were, upon the whole, very encouraging and satisfactory.

The observations will be continued upon the employees of the Italian railway lines, as well as upon the laborers working on several large estates. A further report is promised, based upon still larger numbers, and covering a longer period of time.

THE CRIMINAL USE OF CHLOROFORM.

WHETHER chloroform can be used to facilitate crime is a question which has been debated since the first introduction of surgical anæsthesia. In 1851 Lord Campbell introduced into parliament a bill for the "prevention of offenses," which admitted the belief in the possibility of using chloroform in the furtherance of criminal acts. Dr. Snow combated the idea that it is possible surreptitiously to produce chloroformization. The most extravagant ideas on the subject seem to have been rampant in the minds of the public. The question in the minds of physicians is limited to the possibility of its use on persons in natural sleep. The question of that possibility was practically settled in 1874 by M. Dolbeau, and a paper embodying his conclusions, with details of his experiments, was read before the French Society of Legal Medicine. His views have been known in this country and referred to in various publications, noticeably in a paper in the New Jersey State Medical Transactions in 1879, together with confirmatory experiments of the author.

We are led to refer to this matter because of various papers which have lately appeared in an esteemed contemporary which detail experiments interesting in themselves, but which seem to show a lack of appreciation of previous work in the same field.

M. Dolbeau commenced his experiments by attempts to chloroform animals without awakening them from natural sleep, in which attempts he was unsuccessful, but suspected that the failure was due to too great haste. He continued his experiments, attempting now to anæsthetize human beings. At first he was here unsuccessful, but his experience with one of his subjects, a child, was such that he did not feel warranted in drawing a negative conclusion, and he took advantage of his hospital position to study the subject further. He was here repeatedly successful, his success being proportioned to the skill acquired by experience.

His experiments were divided into three groups. In the first series the attempt was made upon four individuals, and one individual was rendered completely unconscious. The second series comprised six individuals, and two were anæsthetized. In the third attempt upon nine individuals, in six cases was the attempt successful. These individuals were of various ages, from boyhood up to sixty-two years, and none of them were aware beforehand that they were to be the victims of such experiments. His conclusions are interesting not merely for the information in regard to the particular subject, but as an example of French medico-legal opinions, and are as follows: —

"Scientifically it is difficult, but often possible, to render insensible by chloroform persons who are sleeping a natural sleep. Certain precautions, the employment of an agent well rectified, great experience, are some of the conditions which can favor the attempt at anæsthesia. It is probable that certain subjects are absolutely refractory, that is to say that it would be impossible to anæsthetize them in spite of all the precautions taken. Other persons, on the contrary, by preference little children, will undergo anæsthesia easily without being disturbed in their sleep by the irritation which the anæsthetic agent produces in the respiratory passages."

"In its criminal aspect, it is certain that chloroform administered to people who are sleeping can facilitate the perpetration of certain crimes or certain misdemeanors. It is certainly probable that the conditions favorable to anæsthesia rarely find themselves united on the occasion of criminal attempts. In justice the expert ought to declare that it is possible, if not easy, to render a person who sleeps so insensible by chloroform that that person can be the victim of any attempt whatever."

THE PROPER AND FAULTY METHODS OF PLUMBING, DRAINAGE, AND VENTILATION.

THE only regret we have to express in reference to the essay of Professor Clark, of the Massachusetts Institute of Technology, upon plumbing, drainage, and ventilation, and his very interesting exhibition relating thereto, before the recent meeting of the Massachusetts State Medical Society, is that so few of the Fellows were present. This is a subject the importance of which to every medical man cannot be overstated. Physicians in the cities may without serious trouble inform themselves at any time in regard to the proper methods of avoiding the deleterious effects of sewer gases, and yet the majority of Professor Clark's audience on this occasion was made up of city men. The country members, whose means of securing practical information on this subject are more limited, were generally absent.

Within a very few years great changes have occurred in drainage and plumbing appliances. This is well shown in a series of articles now being published in the *Sanitary Engineer*, in which a description and sketch is given of the more important appliances used in plumbing, as indicative of the prior state of the art, so far as the records of the United States Patent Office show it. Once our water-closets, sinks, and wash-basins emptied through unobstructed pipes into the main sewer. Sewer gases naturally went in and out of our houses with the utmost freedom, but at a very high cost to the inmates. Then arose a crying necessity for some means of arresting this evil, and the trap was invented. What is a trap and what is it supposed to do?

A trap is either a bend in the course of a waste-pipe or a cylindrical chamber similarly adjusted, and which receives at one side and discharges at the other. In the first variety the bend takes the form of the letter U, and the pocket of the U is supposed to be constantly full of water. In the second, water fills the chamber above the opening of the discharge pipes. This water, called the "seal" of the trap, was formerly presumed to prevent the regurgitation of gases. This it certainly will not do under all circumstances, but the best experiments go very far to show that a good trap will exclude the dangerous elements of sewer gases. Gas itself will bubble through water, or, if there be no pressure, it will readily permeate the water and be given off on its distal side. A trap alone, however, is not a protection, for, as Professor Clark showed by a clever model, the exhaustion of the air behind a body of water falling down a waste-pipe, so soon as that fluid has passed the trap, will empty the latter of all water. In other words, the trap is "siphoned out," and the "seal" of course is gone. The appreciation of this condition of things suggested the necessity of *ventilation of the trap*. Ventilation remedies the difficulty by tapping the trap above with an air-vent, which prevents the complete emptying of the trap-water. Gas, like the electric fluid, seeks the path of least resistance. If then, gas backs up the drain-pipe as far as the trap, and there finds an air-pipe, it will go off by that means of exit This air-pipe is the great modern improvement in house drainage, and is thus applied: —

Beginning at the main sewer a five-inch pipe of iron (all other materials, lead, earthenware, etc., are useless) is run nearly to the house wall; here a trap put in, and between it and the house is set a four-inch iron air-pipe which may be eight feet long, and fixed to the party fence, or be run up to the roof of the house. This pipe supplies air to the main drain-pipe. The main drain pipe is continued through the house, up through the roof, and is left open at its upper end. Wherever a water-closet, sink, or wash-basin empties into this five-inch pipe each convenience has its trap, and each trap is tapped by a smaller air-pipe, and each of these is carried to a general air-pipe, which should also finally terminate, open, above the roof. By this process of construction a house is well protected. But each trap should be as close to its source of supply as is possible, otherwise odors will arise from slime which will accumulate upon the interior of the intervening pipe, these odors being driven upward by air which is displaced and forced back by the falling water. For similar reasons it is important to trap each convenience, and not

make one trap do the work of several, as was formerly done.

Methods are better now than formerly, but bad work easily defeats good methods. All joints should be made with oakum and hot lead. The lead contracts on cooling, so that a second supply of molten lead should invariably be poured into each joint, and be driven home by wedges.

All water-closet hoppers should be made of glazed earthenware, or porcelain, so called. Other materials, such as iron and rough earthenware, will retain and absorb filth. Kitchen sinks, which first were made of wood, then of iron or soapstone, should be vitrified or made of porcelain. All sinks, water-closets, and washbasins should stand on iron legs, and be *open* underneath. Inclosing them breeds dirt, odors, and rats. Among water-closet hoppers Professor Clark prefers such as are without a pan, and made of one piece of porcelain, including the seat, which should have a second covering of wood. At the back, just below the top, should be an opening communicating by a pipe with a hot flue in a neighboring chimney. Air and gas from below as well as from above are drawn into such an opening with force and conveyed away. The opening, however, should, in Professor Clark's opinion, be larger than in the models exhibited.

We are glad that the Society has enjoyed the privilege of a practical demonstration of these subjects, a clear understanding of which is so vitally necessary to the healthful condition of the public. Physicians, above all others, should be familiar with the best methods of drainage and house purification, for it is through them that the laity can be brought to a realization of what should be done in order to obtain good air and be free from foul and dangerous odors. We trust that the subject of general ventilation may be taken up at the next general meeting of the Society.

MEDICAL NOTES.

— We learn that the Illinois State Board of Health is revising its Directory of the Institutions Granting Medical Diplomas or Licenses in the United States and Canada. Copies of the last issue are being sent to the medical colleges asking for corrections and additions, at the same time reminding the colleges that the schedule of "minimum requirements" as to the good standing of schools in that State is now in force.

— The *Australian Medical Gazette* gives some of the methods employed by the aborigines of Central Australia to prevent conception. One mode is to make an opening into the male urethra just anterior to the scrotum; another is to slit up the entire urethra so as to entirely destroy the urethral canal from the scrotum to the base of the glans penis.

— At L'Hôpital des Enfants Assistés in Paris, where many of the waifs and foundlings of the city are cared for, a unique feature has been introduced by M. Parrot, consisting of a nursing service for syphilitic infants. The nurslings draw their nourishment directly from the teats of the ass, to which they are presented five times during the day, and three times at night. They thrive under this treatment, and seventy per cent. live, while almost all formerly died when fed from the bottle.

— A young woman in Glasgow recently, by way of a "practical" joke, mixed a quantity of jalap in some plum pudding, which she gave to some boys. One of them was, soon after partaking of the pudding, seized with violent vomiting, which continued up to the time of his death, a few days later.

NEW YORK.

— The appointment of Gen. Alexander Shaler as President of the Metropolitan Board of Health was confirmed at the last meeting of the Board of Aldermen by a vote of fifteen to nine. Although General Shaler lacks the special knowledge and practical experience of Professor Chandler he will probably fill the position as ably as any one else would who is not a medical man or a skilled sanitarian. The term of office is six years, and the salary $6500 a year. The other members of the Health Board are Dr. Woolsey Johnson, Dr. Smith, health officer of the port, and Mr. Stephen B. French, President of the Board of Police.

— At the last meeting of the Board of Education it was decided to extend the annual vacation in the public schools until the second Monday in September instead of the first as heretofore. This action was in partial compliance with a petition signed by a large number of medical men, and which Dr. A. Jacobi was mainly instrumental in getting up, asking that the opening of the schools might be postponed until the third Monday in September on account of the depressing effect, especially upon young children, of the intense heat of the early part of September, coming as it does at the end of the long-continued hot weather of the summer.

— Notwithstanding the protest of the Citizens' Committee of sixty Governor Cleveland has seen fit to sign the Aqueduct Bill. In a memorandum filed with the bill he states that it appears to him to be a carefully drawn plan to remedy the existing evil, and supply the pressing need of the city for more water, and that he would be surprised and disappointed if it should appear that the work is not in good hands.

— A student of the College of the City of New York has been fatally poisoned by morphia, which was sold to him at an up-town apothecary's in capsules in place of quinine. The proprietor of the drug store and the clerk who furnished the morphia have both been held for trial.

— The corporation of Trinity Church has recently been building a number of model tenement-houses in which special attention is devoted to the sanitary arrangements. One excellent feature about them is a large open court in the centre for the use of the occupants.

— The coroner's jury in the case of the victims of the Brooklyn bridge disaster on Decoration Day have rendered a verdict in which they find the trustees

and officers responsible in not having the bridge properly policed, especially at the steps, and that the construction of the foot-way and steps is not of sufficient capacity for the accommodation of the foot-passengers.

— The usual effect of hot weather in the mortality of the city was noticed during the high temperature that prevailed last week. On Monday, the first day of the heated term, the number of deaths reported was 80, on Tuesday 90, on Wednesday 97, and on Thursday 113.

— Dr. James Lenox Banks, ex-President of the Physicians' Mutual Aid Society, and one of the most highly respected medical men in New York, died, after a brief illness, on the 3d of June, in the fifty-second year of his age. He was one of the consulting physicians to the Presbyterian Hospital, and a member of most of the medical societies.

Miscellany.

"THOMSEN'S DISEASE."

DR. THOMSEN, District Medical Officer of Kappeler, in Schleswig, was the first to describe in detail a peculiar form of disease from which he himself was a sufferer, and which has occurred in four generations of his family. Since then Dr. Westphal[1] has described two other cases which have come under his observation, and has referred to six others which have been communicated to him by other observers. He names the disease from Thomsen. In the *London Medical Record* of May 15th, we find the following sketch of the affection: —

The pathognomonic symptom is that, under certain circumstances, all active movements are impeded by tonic contraction of the muscles. The symptoms are grouped as follows by Dr. Westphal: (1.) Continued immobility of muscles after sitting or standing. If the patient have been seated a long time, on attempting to rise he can only with difficulty bend his joints, through the rigidity of his muscles. (2.) Contraction after more violent muscular efforts, or after a single powerful effort; for example, supposing a sudden flexion of the fore-arm, the biceps and supinator longus remain so firmly contracted that the tonic cramp can only be overcome by force. (3.) Inconvenient contraction under certain complicated movements; for example, the stiffness will come on while attempting to put on a great coat, in playing musical instruments, turning, writing, and in dancing. Children will be seized in the midst of their playing, suddenly brought to a stand-still. (4.) The tonic cramp will come on so suddenly and unexpectedly that the somatic and psychical phenomena can scarcely be separated. One patient, if he ran quickly and caught his foot against a stone, would fall flat on his face with extended arms and rigidity of his whole muscular system. (5.) Dr. Thomsen states that, for himself, the sudden thought of the affection, or mere imagination, will bring it on. Cold, or long exposure to cold air, will, in such patients, suffice to induce the attack. Continuous and monotonous passive movements favor the subsidence of the cramp, and restore the limbs to their normal condition. The muscles of the trunk and extremities are chiefly obnoxious to this form of spasm, while the sphincters are unaffected. Muscles supplied by the cerebral nerves are subject to the same affection, but in a slighter degree. In talking there is often a sense of stiffness of the tongue, and in eating there is frequently experienced a sense of stiffness of the masseter. One patient observed that, when he opened his mouth to begin to eat, he would find it difficult to shut it again. The closing and reopening of the eyelids could only be tardily effected. The muscles supplied by spinal nerves have shown an increase in their bulk; they are in some cases inordinately strong, but in the majority there is not a corresponding increase of power. The mechanical and electrical excitability of the muscles is augmented. In two cases, microscopal examination of a small portion of a muscle showed a perfectly normal and healthy structure, but the nerve-endiugs were not traced. The tendon phenomena were normal; sensibility was intact. The reflex movements from cutaneous surfaces were generally unimpaired, but on tickling the palm of the hand it would close, then the arm would bend in the natural way, and the same movements would follow in the other limb. The point of highest interest in this affection is its ætiology. It is, as shown by the history of Dr. Thomsen's family, distinctly hereditary. Dr. Thomsen is disposed to class it among the neuroses. Dr. Westphal regards it as a peculiar congenital anomaly of "muscle-tonus," associated with abnormal volume of the muscles.

[1] In Berliner klinische Wochenschrift, March 12.

DELIVERY OF THE AFTER-COMING HEAD BY THE OCCIPUT.

IN the May number of the *American Journal of Obstetrics* Dr. W. W. Seymour recommends a new treatment for occipito-posterior positions of the after-coming head, when the head is not flexed. He cites a case in which after podalic version the occiput had rotated to the sacrum, and asphyxia being imminent he employed strong traction on the shoulders, thus producing extension of the head, and then carrying the body of the child over the mother's abdomen he applied forceps behind the child's body, and delivered with ease. He claims that for facility and celerity this manœuvre is preferable to that ordinarily recommended in such cases, namely, rotating the occiput to the pubes. In discussing the mechanism of delivery in such cases the writer divides them into three classes, according as the head is extended, flexed, or in an intermediate position. In the former he concludes that delivery occurs most naturally by increasing extension, which may be facilitated by traction on the shoulders and rotating the trachelo-bregmatic diameter about the symphysis so that the occipital extremity shall coincide with the plane of exit. In the cases marked by flexion, of course this manœuvre is not available, as the occipito-mental diameter of five and one half inches cannot be extended through an oblique diameter averaging only the same measurement in the bones; so that here one must either effect rotation, or, failing in that, increase flexion and carry the body over the mother's perinæum. The latter method is preferred, with the remark, however, that the flexion can be secured best by pulling down on the edges of the orbit rather than by depressing the lower jaw, as the latter may only succeed in opening the mouth, leaving the position of the head unchanged. In cases intermediate

between full extension and flexion, he advises ordinarily converting them into the first class, and delivering by extension with the body over the mother's abdomen.

In cases of version even when the occiput is anterior, if the chin has become separated from the chest, the author recommends that rather than waste time in trying to flex it, strong traction be applied to the shoulders and the body carried over the perinæum (instead of the abdomen), the occiput then first emerging at the anterior commissure while the chin hooks over the perinæum. In the occipito-posterior positions, if the head is flexed the forceps would go in front of the child's body which is carried back into the perinæum, while the head being extended (as in his case) the forceps are put on behind the child's body.

REPORTED MORTALITY FOR THE WEEK ENDING JUNE 9, 1883.

Cities.	Population by Census of 1880.	Reported Deaths in each.	Deaths under Five Years.	Percentage of Deaths from				
				The Principal Infectious Diseases.	Lung Diseases.	Diphtheria and Croup.	Scarlet Fever.	Measles.
New York	1,206,590	658	271	19.46	15.96	3.19	4.41	4.41
Philadelphia	846,984	338	109	16.24	5.51	6.09	9.41	2.90
Brooklyn	566,689	239	90	16.80	13.02	3.78	4.62	1.68
Chicago	503,304	172	91	27.84	6.96	4.64	4.64	1.16
Boston	362,535	173	77	23.12	12.72	4.05	1.73	9.83
St. Louis	350,522	120	42	19.92	11.62	3.32	3.32	.83
Baltimore	332,190	143	58	23.10	5.60	4.90	5.60	2.80
Cincinnati	255,708	105	43	11.20	18.05	1.90	—	.95
New Orleans	216,140	155	61	37.70	2.60	—	—	.65
District of Columbia	177,638	76	36	19.80	7.92	1.32	9.24	—
Pittsburg (1883)	175,000	35	9	5.71	11.51	—	—	2.86
Buffalo	155,137	35	12	17.14	11.51	—	—	8.57
Milwaukee	115,578	59	38	21.90	18.59	10.14	3.38	—
Providence (1883)	116,755	45	9	13.33	20.00	4.44	—	—
New Haven (1883)	73,000	—	—	—	—	—	—	—
Charleston	49,999	40	20	2.50	—	—	—	—
Nashville	43,461	24	13	29.12	12.48	—	—	—
Lowell	59,485	34	11	11.76	11.76	2.94	2.94	—
Worcester	58,295	19	10	5.26	10.52	—	—	5 26
Cambridge	52,740	19	10	21.04	5 26	10.52	—	5.26
Fall River	49,006	14	2	28.56	—	—	—	—
Lawrence	39,178	6	1	—	—	—	—	—
Lynn	38,284	17	7	17.54	11.76	—	—	11.76
Springfield	33,340	18	9	44.44	5.55	—	—	11.11
Salem	27,598	10	0	10.00	—	—	—	—
New Bedford	26,875	12	3	16.66	16.66	8.33	—	—
Somerville	24,985	16	5	25.00	—	6.25	6.25	—
Holyoke	21,851	12	4	16.66	33.33	—	—	—
Chelsea	21,785	6	2	—	—	—	—	—
Taunton	21,213	5	0	20.00	20.00	—	20.00	—
Gloucester	19,329	12	6	24.99	—	24 99	—	—
Haverhill	18,475	6	0	—	—	—	—	—
Newton	16,995	5	—	—	—	—	—	—
Brockton	13,608	6	0	—	16.66	—	—	—
Newburyport	13,537	6	1	—	—	—	—	—
Fitchburg	12,405	—	—	—	—	—	—	—
Malden	12,017	—	—	—	—	—	—	—
Eighteen Massachusetts towns	143,459	40	5	—	—	—	—	—

Deaths reported 2680 (no report from New Haven): under five years of age 1055: principal infectious diseases (small-pox, measles, diphtheria and croup, whooping-cough, erysipelas, fevers, and diarrhœal diseases) 533, consumption 357, lung diseases 292, diphtheria and croup 105, scarlet fever 89, diarrhœal diseases 89, measles 69, small-pox 60, malarial fever 29, typhoid fever 28, cerebro-spinal meningitis 18, whooping-cough 16, puerperal fever 16, erysipelas 14. From *diarrhœal diseases*, New York 29, Chicago 19, St. Louis and Baltimore five each, Brooklyn, Boston, New Orleans and Springfield four each, Cincinnati and Nashville three each, District of Columbia and Fall River two each, Buffalo, Milwaukee, Charleston, and Salem one each. From *small-pox*, New Orleans 45, St. Louis six, Philadelphia and Baltimore three each, Nashville two, Chicago one. From *malarial fevers*, Brooklyn seven, New Orleans six, New York five, Baltimore four, Chicago, St. Louis, and Cincinnati two each, District of Columbia one. From *typhoid fever*, Philadelphia 10, New York three, Chicago, Cincinnati, Buffalo, and Providence two each, Boston, District of Columbia, Pittsburg, Milwaukee, and Lowell one each. From *cerebro-spinal meningitis*, New York three, Boston and Fall River two each, Philadelphia, Chicago, Baltimore, Cincinnati, New Orleans, Milwaukee, Lowell, Lynn, Springfield, New Bedford, and Northampton one each. From *whooping-cough*, New York three, Philadelphia, Brooklyn, Boston, and District of Columbia two each, St. Louis, Baltimore, Springfield, Holyoke, and Northampton one each. From *puerperal fever*, Chicago three, Milwaukee and Somerville two each, New York, Brooklyn, Boston, St. Louis, Cincinnati, New Orleans, District of Columbia, Providence, and Holyoke one each. From *erysipelas*, New York five, Boston three, Brooklyn two, Philadelphia, Providence, Cambridge, and Westborough one each.

Twenty-six cases of small-pox were reported in St. Louis, Baltimore one; measles 32, scarlet fever 23, diphtheria 22, and typhoid fever three in Boston; scarlet fever seven, and diphtheria six in Milwaukee.

In 36 cities and towns of Massachusetts, with an estimated population of 1,132,092 (estimated population of the State 1,922,530), the total death-rate for the week was 19.48 against 19.66 and 20.40, for the previous two weeks.

In the 28 greater towns of England and Wales, with an estimated population of 8,620,975, for the week ending May 26th,

the death-rate was 21.3. Deaths reported 3521: acute diseases of the respiratory organs (London) 283, measles 119, scarlet fever 88, whooping-cough 72, fever 38, diarrhœa 28, diphtheria 20, small-pox (Newcastle and Birmingham two each, London, Liverpool, and Leeds one each) eight. The death-rates ranged from 12.9 in Birkenhead to 33.5 in Manchester; Plymouth 16; Brighton 17.4; Leeds 18.7; Nottingham 19.9; London 20; Birmingham 21.1; Sheffield 24.7; Leicester 25.8; Newcastle-on-Tyne 30. In Edinburgh 21.9; Glasgow 32.7; Dublin 27.5.

For the week ending May 19th, in 169 German cities and towns, with an estimated population of 8,432,307, the death-rate was 27.4. Deaths reported 4441; under five years of age, 2089; consumption 643, lung diseases 593, diarrhœal diseases 157, diphtheria and croup 141, measles and rötheln 96, scarlet fever 72, typhoid fever 47, whooping-cough 37, puerperal fever 24, small-pox (Breslau and Frankfort a. M. two each, Beuthen one) five, typhus fever (Dantzig, Stettin, and Tilsit one each) ourf. The death-rates ranged from 16.7 in Stuttgart to 36.5 in Wurzburg; Königsberg 29.7; Breslau 36.4; Munich —; Dresden 25.8; Berlin 28.4; Leipzig 21.4; Hamburg 33.4; Cologne 29.7; Frankfort a. M. 21; Strasburg 23.9.

For the week ending May 19th, in the Swiss towns, there were 54 deaths from consumption, lung diseases 45, measles 30, diarrhœal diseases 13, diphtheria and croup six, erysipelas three, typhoid fever three, small-pox one. The death-rates were, at Geneva 30.7, Zurich 24, Basle 24.6, Berne 40.6.

For the week ending May 26th, in the Swiss towns, there were 45 deaths from consumption, measles 27, lung diseases 21, diarrhœal diseases 13, diphtheria and croup five, erysipelas one, typhoid fever one. The death-rates were at Geneva 28.7, Zurich 16, Basle 16.7, Berne 21.4.

The meteorological record for the week ending June 9th, in Boston, was as follows, according to observations furnished by Sergt. O. B. Cole, of the United States Signal Corps: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
June, 1883.	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Daily Mean.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	7.23 A. M.	3.23 P. M.	11.23 P. M.	Duration. Hrs. & Min.	Amount in inches.
Sun., 3	30.374	65	75	52	70	66	93	76	SE	S	SW	4	11	5	C	O	O	—	—
Mon., 4	30.121	69	79	62	100	71	90	87	S	SW	SW	12	13	9	R	O	C	—	—
Tues., 5	30.082	77	87	66	59	33	76	56	W	W	W	11	12	6	C	C	C	—	—
Wed., 6	29.990	73	91	65	74	82	90	82	W	SW	W	3	8	6	C	O	R	—	—
Thurs., 7	29.775	76	89	67	84	52	93	76	SW	S	SW	4	9	9	R	F	R	—	—
Fri., 8	29.810	76	85	66	71	38	71	60	W	W	W	7	13	4	C	C	C	—	—
Sat., 9	29.888	72	86	65	84	49	93	75	SW	S	SW	2	16	5	C	F	O	—	—
Means, the week.	30.006	73	91	52				73										12.12	.47

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening; B., clearing.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM JUNE 8, 1883, TO JUNE 15, 1883.

APPEL, AARON H., first lieutenant and assistant surgeon. Relieved from duty in the Department of Dakota and assigned to duty in the Department of the East. Paragraph 3, S. O. 130, A. G. O., June 7, 1883.

POWELL, JUNIUS L., first lieutenant and assistant surgeon. Relieved from duty in the Department of Texas and assigned to duty in the Department of the East. Paragraph 3, S. O. 130, A. G. O., June 7, 1883.

RICHARD, CHARLES, first lieutenant and assistant surgeon. Relieved from duty in the Department of Dakota and assigned to duty in the Department of the East. Paragraph 3, S. O. 130, A. G. O., June 7, 1883.

BOOKS AND PAMPHLETS RECEIVED. — Gout in its Protean Aspects. By John Milner Fothergill, M. D., Member of the Royal College of Physicians of London, etc. Detroit, Michigan: George S. Davis, Publisher. 1883.

Oliver Wendell Holmes, Poet, Littérateur, Scientist. By William Sloane Kennedy, Author of a Life of Henry Wadsworth Longfellow, etc. Boston: S. E. Cassino & Co. 1883

Lectures on Orthopædic Surgery and Diseases of the Joints. Delivered at Bellevue Hospital Medical College during the Winter Session of 1874-75. By Lewis A. Sayre, M. D., Professor of Orthopædic Surgery, etc. Second Edition, Revised and greatly Enlarged. With 324 Illustrations. New York: D. Appleton & Co. 1883.

Die Anämie. Von S. Laache. Universitäts-Programm für das 2 Semester, 1883. Christiania Die Mallingsche Buchdruckerei. 1883.

Annuaire de Thérapeutique de matière médicale de Pharmacie et d'Hygiene pour 1883. Par A. Bouchardat, Professor d'Hygiene à la Faculté de Medicine de Paris, etc. 43e Année. Paris. 1883.

The Rational Treatment of Spasmodic Asthma. By Richard B. Faulkner, M. D. (of the College of Physicians and Surgeons), Columbia College, New York. (Reprint.)

Annual Report of the Board of Health of the City of Lowell for the Year 1882. Lowell (Mass.). 1883.

The Clinical History and Exact Localizations of Perinephritic Abscesses. By John B. Roberts, M. D., of Philadelphia. (Reprint.)

Heart Puncture and Heart Suture as Therapeutic Procedures. By John B. Roberts, M. D., of Philadelphia. (Reprint.)

Address by J. Y. Thomas, M. D., Savannah, Ga., in Defense of the National Board of Health against Attacks in Congress, and on the Importance of Sapelo Quarantine Station as a Place of Refuge for Dangerous and Infected Vessels, etc. Read before the Savannah Citizens' Sanitary Association, September, 1882, etc. Savannah, Ga. 1883.

The Official Correspondence between Surgeon-General William A. Hammond, U. S. A., and the Adjutant-General of the Army relative to the Founding of the Army Medical Museum and the Inauguration of the Medical and Surgical History of the War. New York: D. Appleton & Co. 1883.

Johns Hopkins University Studies in Historical and Political Science. Herbert B. Adams, Editor. VII. Old Maryland Manors, with the Records of a Court Leet and a Court Baron. By John Johnson, A. B. Baltimore: Johns Hopkins University. May, 1883.

The Second Annual Announcement and Catalogue of the Woman's Medical College of Baltimore for the Session of 1883-84. Balitmore. 1883.

Ontario Medical Association. Report of the Committee on Ophthalmology, 1882. Toronto. 1882.

A Treatise on Therapeutics, comprising Materia Medica and Toxicology, with especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. Wood, M. D., etc., etc. Fifth Edition, Revised and Enlarged. Philadelphia: J. B. Lippincott & Co. 1883.

Fifty-Third Annual Report of the Inspectors of the State Penitentiary for the Eastern District of Pennsylvania. 1882. Philadelphia. 1883.

Original Articles.

ANNUAL ADDRESS[1]

BEFORE THE MASSACHUSETTS MEDICAL SOCIETY,

JUNE 13, 1883.

BY AMOS H. JOHNSON, M. D., SALEM.

THE reasons given for the study of cases to the neglect of books are numerous, plausible, and familiar. They are somewhat of the following sort: It may be said that books make theorists rather than practitioners; that they often preoccupy the mind with notions which are a hindrance rather than an aid; that they are so numerous, so filled with minute detail which has no direct practical importance; so made up of ill-digested compilation, backed up by feeble authority, mixed up with untested novelties and contradictory suggestions; — that life is too short, practical work too urgent, and prospect of solid instruction from books too small, to warrant wide searching among so-called "medical authorities." To support such objections one may tear from their connection and misapply these emphatic words of Sir John Forbes: "No systematic or theoretical classification of disease or therapeutic agents ever yet promulgated is true, or anything like the truth, and none can be adopted as a safe guide in practice." But after we allow their greatest force to all conceivable objections of this class, it will appear that the very persons who utter these criticisms have gained their minute and correct knowledge of anatomy and physiology, and of the symptoms and treatment of disease, more from the writings of masters in medicine than from their own work. This indicates that if at the outset of a medical career it has proved possible to gain the elements of a sound medical education from medical treatises, it should prove far more profitable for the experienced practitioner to gain instruction from similar sources, since ability wisely to compare the statements and reasonings of authors is sure to increase with advance in knowledge. Moreover, all comparison of the study of nature with the study of books to the disparagement of the latter, simply amounts to an enumeration of difficulties. Trials are to be met in any department of learning. Nor do impediments to learning exist in books to so great a degree as in natural phenomena themselves. Allegiance to the guidings of nature cannot be maintained without loyalty also to faithful human records of nature. Nature and literature are not rival claimants to our service. We must not serve them with partisan spirit, nor bring them into antagonism. A large part of the usefulness of personal experiment is to qualify us to understand and pass judgment upon thousands of published researches, which bring revealing light to much in our experience that must otherwise forever remain obscure. We cannot but notice that the wisest and most instructive teachers in medicine, men who have discoursed most forcibly concerning our duty to observe and conform to nature's methods, have been indefatigable students of medical literature. Their wisdom is evidently the result of a life-long study of the methods in which reason has been applied to explain and treat disease. They have learned as much from the detection of errors as from the discovery of new truth, — errors which both they and their successors might have gone on repeating, had not their real character received copious illustration in medical records.

There are certain circumstances or conditions which do not reveal themselves to the direct observer of nature. Their presence will not even be suspected until they are suggested by the clashing of the published conclusions to which wide and careful investigations have led. Methods of treatment shown by a careful analysis of cases to be almost uniformly successful in one epidemic of scarlet fever or diphtheria, prove of feeble efficacy in other localities, or in the same locality in another epidemic, although used by the very persons who thought they had demonstrated their value. These uncomforting results convey the first hint that some conditions have been unregarded, and that our search for and weighing of evidence must take a wider range. Left to ourselves, we might spend a lifetime in searching among local causes for that which is independent of them, nor once have our attention called to the energy of those more universal, but imperfectly understood, causes of disease which exist in atmospheric conditions, or in the very laws of chemical and vital forces.

The fact that such suggestions do not reveal the precise source of a specific disease, or the full reason for its method of action, does not annul their value. For even when they fail to indicate with exactness the direction our explorations should take, they rid our minds of many false conceptions. They awaken us out of contentment with inadequate explanations. They give importunateness to our curiosity.

If it be true, then, that medical literature must furnish us by far the larger portion of our knowledge of facts relating to our own bodies in health and disease, that it treats these facts with explanations which have required centuries for their development, that no comprehensive view of nature can be obtained without its aid, that it points out unproductive methods of study, into which we are sure, if unwarned, to fall, that it hints to us how and in what direction most successfully to push inquiry, that it unfolds the meaning of nature so as to make it more possible to conform to her efforts to maintain health; if this be true, then we may as urgently cry, Wisely heed the records of human experience and reasoning, as urgently as we cry, Heed the teaching of nature. Let us not concede to nature the power to convey the best knowledge of herself. For this work she lacks the means. They are the hardly won product of human reason applied to nature.

When we compare the writings of the most popular teachers of medical science, although we may select those who are among the wisest exponents of the law of conformity to nature, we find that nature receives a great variety of interpretation. What occurs to the best trained inquisitors is sure to occur in much larger measure to ordinary practitioners. The sincerest attempts to understand, and to act according to nature's methods, are sure to exhibit more or less of not incongruity merely, but of mutual contradiction. Practically we are guided not so much by the actual meaning of observed conditions as by our conceptions of them. When we consider the innumerable elements of which our bodies are composed, the intricate coordination of bodily functions, together with the vagueness of the signs which reveal their action, we realize the infinite number of combinations into which they may be thrown. If we reflect, then, upon the varying

[1] Concluded from page 580.

degrees of incompleteness, disorder, and maladjustment which characterizes much of our general knowledge of nature, we shall be impressed with the fact that the physician has no task which should take precedence of his need to bring his conceptions of nature into the highest attainable accord with her actual conditions. To do this more is required than to store the memory with ascertained facts. The natural relations of facts must be sought. They must be mentally set in their proper connections, or, when these cannot be determined, they should not be fancifully linked together, but allowed by standing in isolation to provoke curiosity. This is not the work of nature, but of that which is placed over nature, the *super* natural, the human mind and reason. For although natural phenomena have their place in a definite sequence or order of actions, this sequence is often unknown or exceedingly obscure. Whether the indications of nature shall actually instruct and guide one depends upon the condition and habits of the mind which perceives them. We group facts received according to knowledge already acquired. We value, sort them, and find them suggestive, largely in proportion to our possession of associated truths, but still more largely in conformity with preconceived notions and critical or careless methods of thought. The exhibition of a fact or the statement of a principle in the presence of many different witnesses may awaken in their minds as many different suggestions. Thoughts thus excited may pursue a course, tangential to the truth announced, or revolve around it in the narrow circle of ideas which at the time rule the mind, instead of following it through the course prescribed by its correlation with other verities. A familiar illustration of this truth comes to us when even some of the more common physiological facts or phases of disease or methods of treatment are brought before any large body of physicians for discussion. Then appear more or less wide differences of conceptions, inferences, and conclusions. These often reveal more concerning their originators than concerning the mooted subject. We may quite plainly trace the source of incongruous ideas to different classes of minds. Such observations teach us that the leadings of nature have no higher value than a man's mental characteristics allow them. They do not irresistibly draw one to right reasoning and action. They do not necessarily assume in any given mind their own natural order. What guiding light they offer may suffer so much of refraction and polarization from the mental media through which it passes, that its rays, if not extinguished, cannot be traced to their source. It is wise to insist that he is not fit to be a physician who is not a careful observer of nature. But it is as necessary to insist that observation is not interpretation. To see is not to learn. The revealing power of facts lies not in themselves but in the mind which perceives and uses them. Nature can only lead the mind which is equipped to trace and follow her.

So it happens that all disease has, beside its actual form and history, other ideal forms which may differ widely from the reality. Could we collect the mental pictures of disease of the earlier centuries of medicine, and, giving them visible form, place them beside the conceptions of succeeding generations, their resemblances and relative fidelity to nature might be likened to the incongruous pictures to be found in art museums, where Indian, Egyptian, Chinese, Japanese, and ancient and modern drawings, hanging together, mutually question each other's correctness. If we select for comparison only those notions of disease and its treatment which are common in our own day, we shall find even among interpretations defended by professed students of nature conspicuous disagreement. This proves true not only when such recondite matters as the essential nature of disease germs or molecular action in pathological processes are discussed, but in the interpretation of common cases in every-day practice. Accordingly the practitioner finds that in a given case of sickness he has several forms of disease presented for treatment. First, he has that which nature herself presents in the patient and his surroundings. Second, he has a variety of representations of the nature and proper treatment of the malady gained from books. Third, he has the conception of the disorder indorsed by the minds of the leading physicians of his day, which should be a digest of the teachings of the best authorities with some modern light thrown in. Fourth, he has the popular conviction concerning the source and character of the ailment, which is very far from proving invariably wrong. And fifth, if he wisely steady himself against vacillation, and reason his way through conflicting suggestions, he forms his own conception, which should be the resultant of all the testimonies enumerated, plus that of his own thought and observation. It is this ideal form which each skilled physician treats. This furnishes his working plan. He gains only its faintest outlines from the bodily conditions he witnesses. Yet it is not the product of the imagination. It is constructed from a more or less extensive familiarity with authorities and out of one's experiences, with trained powers of analysis and judgment. Whether this ideal shall prove a caricature or be a true and perfect reproduction of nature will depend not so much upon nature's teaching as upon the contents and action of the mind which receives it.

The symptoms of disease are suggestions rather than revelations. Their meaning appears according to the number and illuminating power of the lights of knowledge already in the mind. The novice gains little or no help from the most instructive microscopical preparations. The microscopist reads from them the secrets of histology and pathology; for every microscope requires two reflectors, one below the objective and the other above the eye-piece, to illumine what is transmitted to the eye with numberless rays of antecedent knowledge. The ordinary traveler on the railroad gains a more or less fleeting pleasure from the scenery. The artist by his side detects combinations which furnish long-sought features to give completeness to many nascent conceptions, and sometimes even permanently build themselves in as the choicest elements of his style. The geologist on the same car receives what enters through the eyes of his fellow-travelers into darkened chambers of their minds, into scenes of tropic vegetation, or of fluvial action, or of glacial movements, or of volcanic disturbances; so that his enthusiasm may lead him, as it did Sir Charles Lyell, to ride for miles with his head thrust out of the car window, to glean from the sections of the hills hieroglyphics, which filled out for him already partially learned paragraphs in the records of nature.

So the forms of disease we treat are an hundredfold more numerous than those in the most prolix nosology. The visible phases of disease are but its outer garb,

often its disguises. Each physician conceives of such forms beneath the ample robe of symptoms as the extent or narrowness, the accuracy or incorrectness, the wise or fallacious use of his learning, may picture in his mind. If content with superficial learning, he may always mistake a few external signs for the real malady. If somewhat better informed, he will recognize the general or local character of an affection, and the portion of the body most affected. If still better instructed, he may determine the central source of the symptoms, and classify the organs which are secondarily and sympathetically affected, and separate sequelæ and complications. With still wider knowledge, he will have before his mind the microscopical anatomy of each organ, the portions which the disorder chiefly elects to disturb, and the natural sequence of troubles to which these disturbances give rise. Into the delineation of his picture of the disorder will enter not only an accurate knowledge of anatomy, physiology, histology, pathology, and chemistry, but the thousand-and-one helps which come from all departments of natural science, and from broad culture in history, philosophy, and the arts. The broader the resources of the mind, the more wisely can it apply any special knowledge relating to human beings.

The differences between our conceptions of disease are not likely to prove those of degree merely, that is, of completeness or incompleteness, but in kind, that is, between true and false. Since the ideas gained from a partial acquaintance with conditions may be quite the reverse of those conveyed by an entire and exhaustive knowledge. The sum total of ascertained facts may lead to correct diagnosis and treatment when a large per cent. of the same facts, although indications of nature, would lead only to error. We may compare the manner of nature's leadings to the process of chromo-lithography. The visible features of an illness stamp the first impression, which gives little suggestion of the figure and coloring which is to follow. Systematic questioning to elicit the condition of the nervous, respiratory, digestive, circulatory, secretory, and other organs and functions, strikes in additional lines and shadings. Methodical physical exploration with mechanical and chemical aids impresses new colors which tone and reinforce those already produced. The process of diagnosis by exclusion, by its pressure, causes the entire disappearance of many tints, and so blends and contrasts the remainder, as to reveal still more the proportions and complexion. But the figure is not complete. It goes on to receive imprints from one's more or less exact knowledge of the natural sciences, from one's knowledge of mental influences, of social customs, of whatever products of human thought and deeds he has studied, since they all reveal somewhat of the physical powers, habits, conditions, and tendencies of human beings. And above the value of the number of special impressions from special blocks of learning, which are needed to perfect the conception, is the skill which so delineates and applies them, that colors and shadings fall with undeviating exactness upon the spots to which they belong.

There is no power to guide us to the right understanding and treatment of disease, like that which takes the raw material of natural phenomena, and with the fingers of the intellect interweaves them with sound philosophy and learning into accurate fac-similes of nature.

This truth carries us on to affirm that the time has come when the cries "*Natura duce*" and "search out the secrets of nature" should at least share their prominence with the exhortation — Master the revelations of nature.

More than thirty years ago the revered author of Expositions of Rational Medicine, in an address on Medical Education, wrote as follows: "In modern times the constituent branches of medical science are so expanded that they are not acquired by any physician in a lifetime, and still less by a student during his pupilage." Since then the name of toilers in the different departments in medicine is multitude. They have wrought with trained and critical observation, with the light of the past to guide them, and with determination to push investigation to its final limits. They have penetrated to conditions of vital processes where material forms subdivide into atomic minuteness. Their importunate searchings for the secrets of nature have been richly productive. Each from his own department has contributed either new facts which shed direct light upon the processes we seek to manipulate, or more rational interpretation of old facts, or the negative results of wisely conducted experiments, which erect so many light-houses and buoys to mark out the right channel of investigation. The fruits of such studies appear each year in modest yet invaluable contributions to numerous foreign and home journals, and, after due allowance for errors and fallacies, a wealth of knowledge thus scattered in fugitive form, like the snow, has silently accumulated in quantity sufficient, if rightly distributed, to smother beneath its pure surface of truth a huge body of errors. But as the falling snow strikes the running stream and vanishes, or alights upon the ocean the live-long winter without leaving a trace, or by the winds is swept from the highway, or piled upon it in obstructing masses, so the beneficent influence of innumerable contributions to medical science is lost upon unappreciative minds, or whirled away by the pressure of daily practice, or heaped in appalling bulk before the studious practitioner, who must open and grade and make for himself a highway by means of, upon, and through them. The sum of these additions to our knowledge of nature in modern times has assumed an overwhelming magnitude. It involves such intricacy, such fineness, such extensiveness of details, as to warrant the lamentation not that so little is known of nature's methods, but that we gather, comprehend, analyze, and utilize so little of the knowledge already communicated.

The leadings of nature may demand so much of mental vigor in the search for the minutest ultimate elements, as to preclude a comprehensive and practical knowledge of general principles. In this way the acquisition of fresh facts at times threatens to perpetuate, as well as to remove, error. Nature then leads with irresistible traction. She may run away with a votary, or captivate him with the attraction of a special class of truths, or surfeit his mind with exceptional items, or swallow up his enthusiasm in a flood of miscellaneous facts, or even crowd him into imbecile skepticism by the contradictions and paradoxes of unsystematized teachings, until he is prepared to use these words of Milton: —

> "That not to know at large of things remote
> From use, obscure and subtle, but to know
> That which before us lies in daily life
> Is the prime wisdom: what is more is fume,
> Or emptiness, or fond impertinence,

> And renders us, in things that most concern,
> Unpracticed, unprepared, and still to seek."
> PARADISE LOST, Book VIII.

The student finds willing and competent guides to the remotest limits of medical science. They take him over fields of research and discovery so vast that, as one's mental endurance and time are waning, he finds himself simply laboring upon some rapidly expanding boundary of knowledge, and so carried more remotely from departments of study which are no less legitimately related to the pivotal facts of medical science, but which lie in the opposite direction.

Since the supply of recorded medical knowledge already exceeds the strongest mental power of digestion, he who labors chiefly to add to this supply may tickle the palate of some epicure in medical lore, or perchance add a relish, or stimulant, or corrective to increase the popularity or nutrient properties of verities already furnished, and occasionally gain a flattering distinction for original work. However legitimate such work for the purely scientific man, the practitioner labors more wisely, who seeks to ascertain the form, the proper order, the proportions, the compatibilities, the relative value, and the timely applicability of facts already known. This broader use of facts maintains mental health, mental hunger, and power to assimilate what is needed to correct impressions, to justly balance judgment, and to provide a larger variety of expedients for the relief of sickness than any original investigations could compass.

The immensity of the body of facts by which nature now offers to lead us often proves discouraging. It inclines one to seek the pith of all preceding wisdom in some recently announced and easily comprehended novelty. But an oft-repeated lesson of experience teaches that we are not to expect that the discovery of any one or more secrets of nature will furnish some easy and sure way of detecting the true nature and treatment of disease. The voluminous results of the laboratory work of physiologists, the weekly published observations of skilled practitioners, give no hint of a discoverable panacea. They only reveal with growing impressiveness the increasing number of elements and conditions whose complex reactions produce the harmony and the discords of nature, but whose recognition and tabulation adds just so much to the student's work to ascertain their relations and to use their light.

This work is to be done by diligent comparison and classification and generalization. If we had this work to begin we might find the present amount of revelations of nature as blinding as the noonday sun to the owl. Even with the powers of a Cuvier, or a Humboldt, or a Goethe, or a Darwin, we might as well seek to measure the ocean with a pint graduate, as to gain an exhaustive knowledge of all the facts on which medical practice is based. But this ocean, filled by the rills and rivers of knowledge which flow from every centre of learning, we can explore with the aid of general principles already framed and indorsed by the concurring experience of former generations. These principles furnish, as it were, vessels into which we gather material to strengthen, enlarge, and sometimes to reconstruct them, and by their aid we discover new means of exploration.

I should be recreant, indeed, to my sense of justice, if I did not here make mention of that indispensable guide through the sea of medical periodical literature, the Index Medicus. May it receive from members of this Society, according to its needs, if not according to its invaluable worth, support sufficient to save its brilliant light from extinction.

A popular humorist has said that "all we need to possess the finest navy in the world is ships, for we have plenty of water." So with less sarcastic intent we may say, that all we need to have the best possible knowledge of nature is brain-work, for we have plenty of knowledge.

It is no time for us to cry most urgently that nature would lead us with fresh revelations. Our minds, already over-taxed by the number, the wide distribution, and recondite relations of ascertained facts, are more likely to be distracted than enlightened by their increase. Overweighted powers weaken, stagger, and go astray. I urge the statement that we need more than any fresh contributions to the details of nature's workings, a proper mastery and use of the items of knowledge which await our acquaintance and our judgment. Why grasp after fresh keys wherewith to unlock the mysteries of life and death without faithfully and vigorously using those already in our hands?

The line of thought we have thus far followed, but upon which the waning hour will soon command us to halt, brings to view a fundamental principle which contests with our motto its claim to supreme importance. It is a principle which lies at the foundation of success in any one of the learned professions: namely, the rule to specially train the mental powers for their special work. Masterly discipline of the thoughts kindles reason into a guiding light of no less importance than that from the simple indications of nature. The reason which seeks first clear conceptions of material facts, and then so combines them that their logical reactions produce mental heat and light, quickening us to further investigation, this is our chief guide, the guide of all other guides, the employer, the director, the judge of guiding nature.

Medical practice consists in the adaptation of a knowledge of several sciences to prevent and alleviate disease. The effectiveness of such adaptation is dependent upon and subject to all the variations of individual judgment. To secure a measure of exactness and agreement in practice which will make the real scientific basis of our work more apparent, we must labor to train our minds to systematic, severely thorough, and scientific methods, and cautious judgments. The rational basis of honorable modern medical practice is too often needlessly exposed to public suspicion. We meet a much larger conflict of opinion than the state of medical learning, or the intrinsic obscurity of medical questions, justifies. How often does a chilling mist of mortification cool our just pride in the actual advances in medical knowledge when we read what is simply professional testimony under the title "expert testimony," although it may reveal to every studious physician lamentably slipshod analysis of half-acquired facts, and random opinions unsustained by any logical use of the evidence in the case, or by any personal experience, or by any known scientific demonstration.

The physician's study and discipline of himself are most important parts of scientific medicine. We are told that "Goethe looked upon his own personality and its relation to outward things as so necessary an ingredient in his scientific labors that he would not separate these learned investigations from his every-day existence. Hence the stress which he laid

upon his personal condition when pursuing his scientific studies." The application of the rule, to allow nature to do her best work in the healing of disease, must extend to the physician's observance of the laws of nature in himself. Of what use is the microscope if the lens be clouded with dust? Of what use the pharmacopœia if the labels are gone? Of what use the knife when its edge is consumed with rust? In like manner, of what value is the physician whose mental optics, and powers, and knowledge, and acumen are blurred and blunted and unavailable by reason of negligent preservation and preparation for their work? No less indispensable than a knowledge of anatomy, physiology, pathology, materia medica, and all related sciences, is the work of measurement of one's mental tendencies, detection of one's mental deficiencies, strengthening of one's mental weaknesses, and adaptation of one's mental processes to the end to which our lives are to be devoted. A work to be indefatigably pursued in order to make one a worthy disciple of rational medicine. That we do not overstate its importance appears from these words of Dr. Jacob Bigelow, contained in an address on Medical Education: "The subjects," he says, "most important to be well taught in medical schools are the elementary principles which constitute the frame-work of medical sciences, *and the mode of thought and inquiry which leads to just reasoning upon them.*"

Confirmatory of the same suggestion are the words of Sir J. Forbes, which appear as the twentieth specification of things most important for medical men to think and act upon. "Lastly and above all," he writes, "to bring up the medical mind to the standard necessary for studying, comprehending, appreciating, and exercising the most complex and difficult of the arts, that are based upon a scientific foundation, — the art of practical medicine. And this can only be done by elevating the preliminary and fundamental education of the medical practitioner."

We have to congratulate one another that among the founders of this Society, were those whose wise counsel gave rise to early efforts to provide thorough medical instruction. The apparent disorder of first efforts, when the constituents of every department of medicine were turned into the mental stomach of the student in the same year, has, like a first confused gathering of foundation stones, disappeared in the construction of the systematic curriculum of the Harvard Medical School; a curriculum of which the architectural symmetry of the new building is not too strongly typical. Yet the convictions of the wisest of our profession, which are so clearly expressed in this costly provision for higher medical education, need reënforcement from the words, and practice, and personal influence of every member of this Society. For public opinion concerning the requirements of a well-equipped medical practitioner still needs to be carried forward. There should not be simply here and there a few among the liberally educated who realize that prolonged study and severity of analytical reasoning are required for sound medical, no less than for sound judicial, opinions. With the increasing popular knowledge of some of the sciences on which modern medical practice is based, we may hope that for one to rush into practice with no more training than that afforded by a common school, and the briefest possible attendance on medical lectures, may seem to the public preposterous, and prove unprofitable.

Further pursuance and wider application of our discussion I hasten to leave with you. If any of the utterances of the past hour have seemed oracular in form or tone, they have been prompted by no oracular spirit. They have been made with no hope to fix with invariable exactness the lines of truth. They will accomplish that for which I have intended them, if they shall in some measure quicken desire and endeavor to be thorough in professional study and work. One who is unable to offer a novel contribution to science may hope by rephrasing old truth to give it fresh influence. I have sought simply to rustle the leaves of the tree of knowledge already in your minds, so as to quicken their call for nourishment. The thought that I had suggested disloyalty to the truth of our motto would bring with it a sense of sacrilege. For I have hoped to increase rather than to tarnish its lustre, by blending with its light the rays of a truth which gives inspiration as well as illumination. With the oppressive fact of our subjection to the laws of matter let us couple the fact that nature's dominion is a *limited* monarchy. This gives us buoyancy in our work. This reminds us of our imperishable natures, under whose dictation the material universe is made to contribute to human exaltation. This truth we detect in the survival of the work, and the spirit, of many members of this Society, who, though now mingled with the dust, still, through us, maintain over nature the dominion of their thoughts. While, therefore, we keep the words of our motto upon our seal, as a reminder of a historic epoch, as well as the announcement of a vital principle, let us mentally tone their exclusive form, so that to us they shall always read, —

Ratione et natura ducibus.

THE NEW TREATMENT OF GRANULAR LIDS BY JEQUIRITY,

WITH AN ANALYSIS OF THIRTEEN CASES, OCCURRING IN THE SERVICE OF DR. H. DERBY, AT THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY.

BY MYLES STANDISH, M. D.,

First Ophthalmic Interne.

The use of this drug in the treatment of granular lids and pannus is new to the medical world. The botanical name of the plant is Abrus precatorius. It is a native of India, but is now found in South America, the Pacific Islands, the West Indies, and tropical Africa. It is supposed to have been introduced into these latter countries. It is known officinally in the Pharmacopœia of India under the name of Abri radix, the root being used as a substitute for licorice. The portion used for the present purpose is not, however, the root but the seeds, small red peas, which have long been used in tropical countries as beads, and in India as weights under the name of rati, and as such have been estimated at two and three sixteenths grains each. Wecker has recently published two articles in the *Klinische Monatsblätter* urging upon the profession the use of this agent for the treatment of granular lids. He states that it has long been in vogue in Brazil as a popular remedy for this disease, but that it was unused by, and unknown to, the medical profession there. Dr. H. B. Chandler, my colleague, says that it is also employed by the negroes in the West Indies for what

they call "blurred sight" in very much the same manner as we have used it here.

The drug is prepared for application by putting the freshly-pulverized seeds into cold water, and allowing them to macerate for twenty-four hours, then filtering, and the preparation is ready for use. Our first preparation was made according to the first prescription of Wecker, which was three grammes of the seeds to one thousand grammes of water. This preparation was used on three cases, but entirely failed to produce any result. The next preparation used was according to Wecker's second prescription, ten grammes to five hundred grammes of water. This was the form in which the drug was used in nine of the following cases. In four of the cases the preparation was made by digesting, ten grammes of the drug for five hours exposed to the air with just enough water to cover the powder, and then placing it in five hundred grammes of water, allowing it to remain for nineteen hours, and filtering. The preparation was freshly made for each case. The method of application was to paint the outside of the lids thoroughly with the above preparation, using a small camel's-hair brush for that purpose, and then everting the lower lid, and carrying the brush rapidly across it two or three times. This was done three times a day. A separate brush was used for every patient. The patient was kept in a dark room during treatment, and as long afterward as seemed necessary. After the applications were discontinued no further treatment of any kind whatever was given. The first application was always at night, and the accompanying notes were taken at intervals of twenty-four hours from first application. The vision before and after treatment was tested with extreme care, and is given in decimal fractions in the notes, 1. being normal vision.

CASE I. Woman, thirty-nine years old, domestic. Lost left eye seventeen years ago. Has been troubled with right eye for fifteen years; symptoms, redness, pain, photophobia, and swelling of lid, with progressive diminution of sight since commencement of trouble. Has been under treatment for granular lids during this time at different hospitals in this city, New York, Lowell, at Manchester, Eng., and at this institution, and has been treated as an in-patient in these different institutions at various times amounting in all to about two years of this time, and almost a constant attendant at other times.

Present condition: Conjunctiva of lids very vascular, and covered with fine, bright-red granulations, presenting the appearance of granulations that had been treated for some time with the usual applications. The upper two thirds of the cornea covered with a thick opaque pannus, the upper half of which was of a thick, fleshy character. Vision = .01.

April 21, 1883. First application.

April 22d. No symptoms.

April 23d. Œdema of lids, much discharge, and photophobia.

April 24th. Croupous membrane; œdema of lids, which have a purplish hue; photophobia not excessive; lower third of cornea now covered with a grayish opacity; chemosis; chills last night and to-day.

April 25th. Heated turns, chills, dizziness, no appetite, constant pain through head and forehead; lids quite purple; profuse thick discharge. Discontinued jequirity. Total, ten applications.

April 26th. In twenty-four hours since treatment discontinued complete subsidence of all constitutional symptoms, with œdema, chemosis, discharge, and photophobia very much diminished.

April 27th. Some œdema; disappearance of other symptoms; lower portion of cornea again transparent.

May 14th. Conjunctivæ of lids smooth; no granulations; pannus cleared up so that iris is perfectly visible; one vessel runs up on to the cornea; condition of cornea improving from day to day; vision = .1; irregular corneal astigmatism.

CASE II. Girl, thirteen years old. Has had "sore eyes" since she was four years old. Belongs to a family every one of whom has granular lids.

Condition at commencement of treatment. Large, rough granulations covering entire conjunctiva of the upper lid of each eye. The cornea of each eye was covered with a thick, gray pannus on its upper half, and vascular. Vision right eye = .016. Vision left eye = .05.

April 21st. First application; both eyes.

April 22d. Light causes considerable pain; no other symptom.

April 23d. Slight amount of discharge; no membrane; other symptoms not intensified.

April 24th. Profuse discharge and great photophobia; no constitutional symptoms. Discontinued jequirity. Total, nine applications.

April 25th. Discharge has ceased; slight photophobia remains.

April 28th. Light causes no pain.

May 14th. A few sharply projecting granulations along the retro-tarsal fold on the conjunctiva of the upper lid; these appear to be shrinking in size daily; conjunctivæ appear quite white; pannus entirely disappeared; irregular corneal astigmatism; vision right eye = .2; vision left eye = .3.

CASE III. Girl, fourteen years old, domestic. Eleven months ago both eyes became red; some swelling of lids; pain on exposure to light, etc. Has had treatment as an out-patient at one of the hospitals, and as a house-patient at this institution. Not only had received no relief, but both eyes had become progressively worse.

Condition at commencement of treatment: Conjunctivæ of both upper lids hyperæmic, with fine granulations over entire surface; conjunctivæ of both lower lids covered with coarse, rough granulations. The entire cornea of each eye covered with a thin, grayish infiltration, with the exception of a clear spot one millimetre broad and three millimetres long on the inner side of the right cornea. There were no large vessels on the cornea. Vision right eye = .1. Vision left eye only perception of light.

April 21st. First application; both eyes.

April 22d. No photophobia; free watery discharge with some pus; shreds of croupous membrane hanging from conjunctiva.

April 23d. Profuse discharge; no croupous membrane; photophobia not present.

April 24th. Profuse discharge; no membrane, no œdema, no chills.

April 25th. Dizziness; no other change of symptoms. Discontinued jequirity. Total, twelve applications.

April 26th. Discharge almost entirely ceased.

April 28th. Slight discharge, and patient says she sees better.

May 5th. Corneæ clearing up somewhat, but very slowly.

May 10th. Increase of discharge, and some pain in both eyes last few days. To-day the eruption of rubeola appeared on face and shoulders.

May 22d. Vision in each eye = .1.

Case IV. Woman, twenty-one years, rubber worker. Received burn from pistol on left eye six years ago. More or less swelling of the upper lid ever since. Eighteen months ago eye became red, sensitive to light, followed by loss of acuteness of vision; has been under treatment as an out-patient for a year and made no gain, in fact vision has diminished.

Condition at commencement of treatment: Marked fullness of the upper lid. Conjunctiva of upper lid bright red and covered with fine granulations. Coarser granulations along the retro-tarsal fold. Conjunctiva of lower lid covered with coarse bright-red granulations. Cornea, entire outer half covered with a vascular semi-transparent cloudiness, over which run several large vessels. Vision left eye = .1.

April 21st. First application; left eye.

April 22d. Photophobia; free watery discharge, and some shreds of croupous membrane.

April 23d. Considerable œdema of lids; croupous membrane; great photophobia; chills.

April 24th. Tensely swollen lids, purple, and separated with difficulty; croupous membrane and chemosis, with thick discharge; chills; headache on same side; loss of appetite; complains also of dizziness upon attempting to walk.

April 25th. Discontinued treatment. Total, ten applications.

April 26th. Subsidence of all acute symptoms both local and constitutional.

April 28th. Very slight intolerance of light; slight discharge; increased cloudiness of cornea.

May 16th. No granulations on lower lid; line of coarse granulations along the retro-tarsal fold; increased cloudiness of cornea as compared with commencement of treatment. Vision left eye = .05.

Case V. Man, thirty-four years old, mason. Burned both eyes with mortar in January, 1882. Obliged to give up work on account of present trouble in January, 1883. Has had constant treatment since as an out-patient at a hospital, without benefit. Has been a house patient at this institution for a month without abatement of symptoms. Has pain, photophobia, and watery discharge, with some pus.

Condition at commencement of treatment: The upper lids of both eyes were covered with fine, bright-red granulations and extreme hyperæmia of the conjunctiva. The upper third of the cornea of each eye was covered with a red vascular pannus. Vision of left eye = .3. Vision of right eye = .1.

April 16th. First application; both eyes.

April 17th. Complains that he cannot open them on account of pain from least light.

April 18th. Same pain; profuse discharge of watery secretion.

April 19th. Feels weak and excitable; has chills, with fever turns; headache; œdema of lids; pus-like discharge; croupous membrane on conjunctiva of both lower lids. Ordered one eighth grain morph. sulph. at night. Omitted jequirity. Total, nine applications.

April 20th. Same pain on left side; discharge subsiding.

April 22d. Photophobia disappeared; discharge greatly abated.

April 23d. Right eye feels perfectly well; slight photophobia and discharge from left eye.

The vision in this case was unfortunately not taken, but the patient stated that his eyes were much more comfortable, and that he could see considerably better.

Case VI. Man, thirty-eight years, shoemaker. Six months ago was struck in the face by a snow-ball containing ice, injuring both eyes. No pain or swelling of lids before injury. Has had lachrymal abscess. Since admission to this institution he has had great pain, swelling of lids, photophobia, with profuse watery discharge, mixed with pus. Has had ulcer of cornea on right eye several times since admission, which rapidly disappeared under atropine. Has had usual treatment for granulations since entrance, with an abatement of swelling of lids and photophobia, but two weeks ago got much worse, with great pain and large amount of discharge, containing much pus. Pain so great patient desired to have right eye enucleated.

Condition at commencement of treatment. Conjunctiva of lids bright red and covered with coarse granulations. Upper lid much swollen; much photophobia. Thick vascular pannus over upper half of cornea, with profuse discharge of a watery character. Vision of right eye = .016.

April 16th. First application; right eye.

April 17th. Slight pus-like increase of discharge.

April 18th. Complains of pain and photophobia; discharge increasing; croupous membrane on conjunctiva of lower lid; œdema of lids. Ordered one eighth grain morph. sulph. at bed-time.

April 19th. Slept well last night; has pain in head on same side extending back over forehead from eye; increase of discharge, and some chemosis; chills, with fever turns. Ordered one quarter grain morph. sulph. at night. Omitted jequirity. Total, nine applications.

April 20th. Some pain; thin, pus-like discharge from eye.

April 22d. Pain continues; continued discharge.

April 23d. Œdema remains; considerable swelling; discharge continues; ulcer of cornea one millimetre in diameter discovered to-day on cornea.

April 27th. Ulcer of cornea treated with atropine without improvement.

May 16th. Ulcer of cornea still persists without becoming much worse; granulations much reduced in size but still present. Vision right eye = .02.

Case VII. Man, thirty-four years old, baker. Right eye began discharging water in January, 1882, and three weeks later left eye became troublesome also. Was obliged to give up his occupation, and was treated at institutions in New York and Philadelphia for granular lids. Had upon entrance much pain running up over forehead, and considerable photophobia.

Condition at commencement of treatment: Conjunctiva of upper lids covered with fine bright-red granulations, and larger granulations along the retro-tarsal fold; cornea, upper half opaque with four large vessels running in to the centre of cornea. Vision left eye = 1.

April 16th. First application; left eye.

April 17th. Photophobia; slight watery discharge.

April 18th. Œdema of lids; pain in eye; increase of pus-like discharge; croupous membrane on lower lid. One eighth grain morph. prescribed at night.

April 19th. Complains did not sleep last night; has nausea; extreme pain in right side of head; great pho-

tophobia; no croupous membrane, but shreds of membrane floating out from conjunctiva of lids on a profuse watery discharge. Ordered one fourth grain morph. at night, and omitted jequirity. Total, nine applications.

April 20th. Much pain last night, but to-day it has all disappeared; considerable discharge, with some shreds of membrane.

April 22d. Photophobia ceased; discharge nearly so.

April 23d. Eye feels perfectly well; no discharge.

May 21st. Conjunctiva of lids smooth; no granulations; pannus has disappeared. Vision left eye = .6.

CASE VIII. Man, twenty-six years old, laborer. Eyes have been very troublesome for four years. Entered infirmary December 13, 1882. Granulations and slight pannus in both eyes, and a large central vascular ulcer of cornea of left eye; ulcer perforated December 19th; discharged February 14th with large central opacity of left eye; granulations and pannus improved; reëntered April 23d.

Condition at commencement of treatment: Left eye: Conjunctiva of upper lid, thick, coarse granulations; lower lid, finer granulations; cornea entirely covered with thick, grayish-white, vascular infiltration, completely covering outline of iris; many large vessels running over conjunctiva of globe. Vision simply perception of light. Right eye: Condition of lids similar to left eye, and cornea entirely covered with a thin semi-transparent grayish infiltration. Vision of right eye = .01.

April 27th. First application.

April 28th. No photophobia; croupous membrane; profuse clotted discharge of pus.

April 29th. Condition remains much the same as yesterday; no appetite, but slept well.

April 30th. Very profuse discharge of thick clotted pus; discontinued jequirity in right eye. Total, right eye, nine applications.

May 1st. Discontinued treatment in left eye. Total, left eye, twelve applications.

May 3d. Pus discharge entirely ceased; some watery discharge.

May 5th. Discharge entirely ceased; patient says he already sees better with right eye, and that he sees more light with left eye.

May 12th. Right eye: Cornea does not seem to clear up as expected. Left eye: Cornea, even the central portion, has cleared up greatly; the iris and margin of pupil distinctly seen through cornea.

May 19th. Grayish point has appeared in lower third of right cornea, with pain and symptoms of corneal ulcer; atropine was used.

May 21st. Symptoms of the 19th seem becoming more pronounced; atropine was discontinued, and a collyrium of pilocarpine used; the symptoms of ulcer of cornea disappeared under the pilocarpine, and the cornea cleared up.

May 31st. Conjunctivæ of lids smooth. Vision of right eye = .08; counts fingers with left eye at a distance of two metres.

CASE IX. Woman, twenty-two years old, domestic. Duration of disease, two years; and has been under treatment almost the entire time as an out-patient of this institution.

Condition at commencement of treatment: Fine granulations over entire conjunctiva of both upper lids; slight grayish infiltration of upper third of each cornea. Vision right eye = .1. Vision left eye = .008.

April 27th. First application.

April 28th. Great photophobia; profuse discharge; pain spreading up over forehead; no croupous membrane.

April 29th. Complains of constant pain; great intolerance of light; œdema of lids so great as to prevent their being separated in the least; profuse discharge of clotted pus; loss of appetite; chills and feverish turns; reduced strength of jequirity, one half.

April 30th. Excessive virulence of symptoms greatly abated; still great intolerance of light, and profuse watery discharge containing pus; omitted jequirity. Total, nine applications; three one-half strength.

May 1st. No pain, only slight discharge.

May 14th. Conjunctivæ of lids smooth; no granulations; pannus entirely disappeared; some irregular astigmatism of cornea. Vision right eye = .4. Vision left eye = .1.

CASE X. Girl, twelve years old, school-girl. Disease of four years' duration; has been treated as an out-patient at different times at three hospitals of this city.

Condition at commencement of treatment: Has constant pain and photophobia; fine bright-red granulations over the conjunctiva of both upper lids; thick pannus over upper half of each cornea, dense enough to completely hide the outline of the iris. Vision of left eye = .1. Vision of right eye = .3.

May 5th. First application.

May 6th. Photophobia; discharge.

May 7th. More intolerance of light; discharge increasing, containing pus; slight œdema.

May 8th. Continuance of symptoms of yesterday, but no constitutional symptoms; discontinued jequirity. Total, nine applications.

May 16th. Conjunctivæ of lids smooth, and pannus much thinner, and becoming clearer daily. Vision of right eye = .4. Vision of left eye = .3.

CASE XI. Woman, sixty years old, housewife. First trouble with eyes three years ago; was treated as an out-patient at Carney Hospital for three months, and eyes improved and remained tolerably comfortable until a month ago.

Condition at commencement of treatment: Thick, coarse granulations over conjunctivæ of both upper lids; grayish infiltration over upper half of cornea of left eye; right cornea has a grayish infiltration over upper half, on which are several small vascular ulcers. Vision both eyes = .08.

May 5th. First application.

May 6th. Photophobia; watery discharge; no pain.

May 7th. Shreds of croupous membrane; discharge contains some pus; some pain and marked intolerance of light.

May 8th. Some œdema; more pus in discharge; has chills and feverish turns; discontinued jequirity. Total, eight applications.

May 9th. Rapid subsidence of all the symptoms.

May 16th. Conjunctivæ of lids perfectly smooth; pannus fast disappearing. Vision of both eyes = .4 nearly.

CASE XII. Same patient as Case VI.

Condition of left eye at commencement of treatment: Same fullness of upper lid as in other eye. Fine red granulations over conjunctiva of both lids. Light grayish infiltration over upper third of cornea. Vision = .1.

May 9th. First application.

May 10th. Great photophobia and profuse discharge.

May 11th. Constant pain; œdema of lids excessive; profuse discharge of thick pus; chills; feverish turns; dizziness; loss of appetite.

May 12th. Œdema so great lids cannot be separated, and required one half grain morph. sulph. last night to sleep; jequirity stopped. Total, eight applications.

May 13th. Much less œdema and pain, and constitutional symptoms entirely disappeared.

May 15th. Little or no discharge; œdema subsided, but eye does not clear up.

May 18th. Reappearance of intolerance of light somewhat, and upon examination found small ulcer of cornea.

May 22d. Ulcer of cornea remains without increasing in size; granulations still to be seen on upper lid.

Case XIII. Same patient as Case VII.

Condition of right eye at commencement of treatment: Slight infiltration at upper border of cornea, and conjunctivæ of lids covered with fine bright-red granulations. Much discharge and some pain, and patient requested treatment in the second eye. Vision right eye = .3.

May 9th. First application of wash.

May 10th. Considerable photophobia; considerable puriform discharge.

May 11th. Œdema of lids; constant pain in eye; profuse discharge of clotted pus; thick croupous membrane; was given one fourth grain morph. sulph. at night.

May 12th. Nausea; extreme pain; great photophobia; very profuse purulent discharge; omitted jequirity. Total, eight applications.

May 15th. Minute ulcer cornea; all acute symptoms have disappeared; slight photophobia.

May 22d. Conjunctivæ of lids smooth; quite red.

The temperature of these cases was carefully taken morning and evening for three days before the commencement of the treatment; during the days the applications were made, and for three days afterward.

These charts are not published because they were all of exactly the same character, and showed an invariable rise of 1° F. on the second or third day, which was immediately lost on the discontinuance of the treatment. Deductions made from so small a number of cases are of course not absolutely to be depended upon, but nevertheless they have a certain amount of real value. In appearance the cases at their acme resemble in all external particulars a case of ordinary purulent ophthalmia, but it will be noticed that in order to maintain this condition stimulus from repeated applications of the wash is necessary, and that as soon as these are omitted all symptoms both local and constitutional immediately begin to subside. The same control can be exercised to a partial degree by reducing the strength of the wash, as is seen in Case IX. This is a quality of the greatest importance, as it enables us, if the symptoms are becoming exaggerated, to check the progress of the inflammation immediately. From this fact danger to the other eye from inoculation is very slight, as there would have to be repeated inoculations to produce any effect. This is well illustrated in the reported cases, as in seven of them it was used in one eye only, and no precautions were taken to prevent such an accident, and yet in no case did it appear, which certainly is far from the every-day experience with purulent ophthalmia. From the time the discontinuance of the applications the recovery is apparently progressive until the conjunctiva is quiet and smooth. The principal symptoms, which seem to be most grave, and which appear to indicate a reduction of the strength of the wash or a discontinuance of the treatment before the usual number of nine applications is made, are continuous pain in the eye, spreading up over the forehead, and an œdema of the upper lid, together with chemosis sufficient to make pressure on the cornea. In Cases IV., V., VI., and IX., where these symptoms were prominent the results were not as good as in other cases, with the exception of Case IX., where the wash was reduced one half strength on the second day. It would seem, also, that the treatment needs to be pushed up to the production of the constitutional symptoms, as described in the notes. In Case II., where this was not done, there were a few granulations remaining, although they were apparently shrinking in size when the patient was discharged. This treatment of granular lids seems to be appropriate at all stages in which the palpebral conjunctiva is in a highly vascular condition, with perhaps this single exception: In cases where the granulations are sufficiently large to cause marked fullness of the lid, this, together with the superimposed œdema, seems to make the application of the conjunctiva of the upper lid to the globe of the eye sufficiently tense to prevent the influence of the wash extending over the whole lid, as well as irritating the cornea with its pressure.

With this treatment danger to the cornea necessarily presents itself for serious consideration. In none of these cases did any corneal complication occur during treatment, that is, while the applications were being made, but in five of the cases there supervened in from three days to three weeks afterward either slight ulcerations of the cornea or an increased vascularity. The result in none of these cases has been serious, but they serve to direct attention to what may be an important fact, namely, that three of the five, Cases IV., V., VI., had previously experienced burns or some accident to the eye, and one, Case VIII., had previously exhibited a tendency to serious corneal ulceration. There was no history of an accident in any of the other cases. Another factor that may have had an influence on these cases was that in three of them (Cases VI., VIII, XIII.) the third preparation mentioned at the commencement of this article was used, which I so prepared on the theory that the infusoria in the wash caused the inflammatory action; whether this is true or not, this wash certainly produced a much more violent inflammation than the other, and in the only other case in which it was used (Case IX.) it was necessary to dilute it very materially. This latter case did well. With a close attention to the symptoms, as before stated, and an avoidance of these classes of cases, I think we may have no fear of corneal complications. In advocacy of this treatment it may be safely said that in two thirds of the cases the result was highly satisfactory; that more was accomplished in three days of active treatment and ten days to two weeks rest than is commonly the case by three months active treatment in cases of similar character by the usual methods. The patients themselves testified to the relief they experienced from it by requesting the same treatment in the other eye when only one had at first been treated.

That it is a specific is not claimed, but of the fact that it is a step in advance there can be no doubt.

RECENT PROGRESS IN SURGERY.

BY A. T. CABOT, M. D.,

ANTISEPTICS AND ANTISEPTIC DRESSINGS.

THE search for the ideal, safe, and sure antiseptic still goes on with a vigor which suggests a widely prevailing dissatisfaction with carbolic acid on account of its poisonous qualities, and with its weaker substitutes on account of their inefficiency.

Iodoform, which was introduced with great *éclat*, and from which so much was expected, has already had scores of cases of poisoning registered against it, with not a few fatal results. König[1] reports thirty-two cases of iodoform intoxication, with nine deaths; and most surgeons using the drug extensively have seen alarming symptoms follow it.

Dr. A. Zeller,[2] of Berlin, has recently investigated the question of the absorption and elimination of iodoform with some care. He found that the earliest sign of a dangerous absorption was the presence of bile pigment in the urine; this being noticed sometimes several days before the appearance of more menacing symptoms. Next appeared loss of appetite and drowsiness, followed in severe cases by delirium, mania, and paralysis.

He concludes from his experiments that the absorption of iodoform from wound surfaces cannot be estimated or calculated upon, it varying greatly in different cases where the conditions are apparently similar.

In fatal poisoning a relatively small amount of iodine is found in the urine, but a considerable quantity is present in the blood. This accumulation of iodine in the circulation confirms and explains the cumulative action of the drug noticed by Schede, and greatly enhances the dangers of its use, for before the appearance of alarming symptoms a considerable quantity of iodine may collect in the blood, and elimination through the kidneys being very slow the poison has a long time in which to act.

In this way is to be explained the fact that the immediate removal of the iodoform dressings does not always check the progress of the intoxication. Iodoform should therefore never be put into wounds from which it cannot be easily removed; and it is doubtful whether it is ever well to pour it freely into wounds which are expected to heal by first intention.

Its use in small quantities as a stimulant application to fungous granulations, and to local tubercular affections of bones or soft parts, is uncontroverted, and it would be hard to fill its place in this regard.

Corrosive Sublimate. — Since Koch's[3] experiments upon the power of antiseptics, the efficacy of corrosive sublimate as a germicide has led to its quite extensive use as a surgical antiseptic.

Dr. H. Kümmell[4] has described at some length the experience with it in Schede's Clinic. Although at the time of his paper they had been using it for several months in wounds of all sorts and in patients of all ages no cases of poisoning had occurred In two cases of feeble old men slight salivation followed its use, but this quickly yielded to treatment. This immunity from toxic effects seems to be due to the great dilution of the solutions used. Of these there are two: one containing one part of corrosive sublimate to one thousand parts of water, and the other containing one part of corrosive sublimate to five thousand parts of water. The only ill effect of the sublimate solution is that it roughens the hands of the surgeon or dresser. Kümmell says "the sublimate solution which is itself without smell does not irritate the wounds, puts a stop to secretion, and disinfects in a short time foul discharges."

Sublimate gauze and wadding are made by soaking gauze or absorbent cotton in a solution containing

Alcohol	4490 parts.
Glycerine	500 parts.
Corrosive sublimate	10 parts.

It is then wrung out, and when dry is ready for use.

Sublimate sand is extensively used in Schede's Clinic. To prepare this, ordinary clean sand is heated in a crucible to destroy all organic matter, and then impregnated with a solution of corrosive sublimate in ether, of which enough is used to deposit on evaporation one drachm of sublimate in every pound of sand. This sand thus prepared is poured directly into the wounds. In one case of resection of the hip the cavity was filled with a kilogramme of the sand. Outside of it an absorbent dressing is applied to catch the discharges filtering through the sand. For absorbent dressings glass wool, so called, is used in Schede's wards. This is very fine spun glass, soft enough to be made into cushions like oakum. Glass thread woven or braided into strands is used for setons. Silk when used is soaked for two hours in a one per cent. sublimate solution. Catgut has not yet been successfully prepared, the trouble being that it dissolves too readily. Carbolic acid is still retained for the spray and for soaking the instruments.

Peat Dressings.[5] — Drs. Neuber, Goffky and Prahl, publish the experience obtained in Esmarch's Clinic in the use of these dressings.

The peat used is dark brown or gray in color, and is a moss-peat formed by the accumulation of the débris of moss beds in past ages. It is very dry, and extraordinarily absorbent, ten parts of the peat taking up eighty to ninety parts of water. Goffky, who investigated its antiseptic properties, found that, —

(1.) The peat is not free from living germs of lower organisms.

(2.) The peat possesses no destructive power over bacteria; is not, in short, a disinfectant, properly speaking.

(3.) The peat when moistened with suitable culture fluids does not prevent the growth of lower organisms in and through it. On the other hand, however, it can somewhat retard their growth.

The clinical value of the material as described by Neuber is in marked contrast to its very moderate power in restraining the growth of lower organisms. This seems to be due to its wonderful absorbent and desiccant properties.

The fluids from a wound are sucked greedily into the peat, and there coming in contact with the air, quickly evaporate. The wound, being kept thus perfectly dry, soon (within a few hours) ceases to excrete fluid, and healing progresses rapidly.

In the great majority of the cases — many of which were severe operations (large amputations and excisions) — healing was completed under one dressing.

[1] Bull. Gen. de Therapie, 30 Mars, 1883.
[2] Archiv f. klin. Chirurgie, 28 Band, 3 Heft.
[3] Mittheilung. aus dem Kaiserlichen Gesundheisamte, Berlin, 1881.
[4] Archiv f. klin. Chirurgie, 28 Band, 3 Heft.
[5] Archiv f. klin. Chirurgie, 28 Band, 3 Heft.

The powdered peat is applied to the wounds in gauze bags, which, before application, are sprinkled with a solution of corrosive sublimate, one to one thousand, which is used, not to disinfect, but to moisten them, and so increase their absorbent power.

SUBNITRATE OF BISMUTH.

Kocher,[1] of Bern, appears as an advocate of subnitrate of bismuth as an antiseptic wound dressing. He claims, by experiments, to have established its germicide powers.

He irrigates the wound with a one per cent. mixture of bismuth in water. The gauze, bandages, and so forth, are wrung out in a ten per cent. mixture of the drug. Bismuth paste is also used over superficial wounds, and along the line of an incision.

He advocates, too, the treatment of wounds by the secondary suture.

The stitches are placed in the edges of the wound at the time of operation, but the wound is left open and dressed with bismuth for twenty-four to forty-eight hours, when the edges are finally drawn together, often without the introduction of a drainage tube.

The unlimited use of bismuth upon wounds Kocher found to give rise in some cases to poisonous symptoms. The urine becomes dark colored, sometimes with evidences of acute desquamative nephritis. A dark line appears along the gums, which may become much swollen, with loosening of the teeth.

These ill effects he has not noticed under the moderate use of the drug as above described, and when they have appeared they have rapidly vanished upon discontinuing the dressing.

CANCER OF THE TONGUE.

Dr. Wölflen[2] gives the results of operative treatment in Billroth's Clinic.

During the last three years a new method of operative procedure has been followed, and the results, thus far, have been better than by the old methods. Billroth's new operation is as follows: —

First, both lingual arteries are tied. The mouth is then held open with a gag, and any bad teeth opposite the disease are removed.

In severe cases the gum is rasped from the jaw with the periosteum scraper, and the gnawing forceps used to remove any portions of bone affected by the disease. The floor of the mouth is then removed with scissors, and any bleeding points are tied. Lastly, the tongue is drawn forward and extirpated.

Permanganate of potash, either in powder or in strong solution, is thoroughly applied to the wound, and a thick drainage tube is carried out through the floor of the mouth.

Feeding is accomplished through a stomach tube until the drainage opening closes.

Of seventy-one cases treated in this manner only 17.6 per cent. died from the immediate effects of the operation; while in the cases previously operated upon by the old methods, and treated simply with antiseptic washes, the mortality rate was thirty-two per cent. The cause of death has usually been septicæmia or pyæmia. In ten of the seventy-one cases the cancer had not recurred at the time of publication.

The testimony of surgeons as to the ease and safety of Mr. Whitehead's method of excision of the tongue, without previous ligature of the lingual arteries, is very conflicting. Many report that they have found the method comparatively bloodless, while others have met with serious difficulty from hæmorrhage.

[1] Volkmann's Sammlung klinischer Vorträge, No. 224.
[2] Archiv f. klin. Chirurg., 26 Band, 2 Heft.

SURGERY OF THE KIDNEY.

Quénn[3] reviews the one hundred cases collected by Harris, and adds to them two French cases.

Of these one hundred and two cases, fifty recovered, forty-six died, and six remained under treatment when reported.

Of the ninety-six completed cases, forty-six were operated upon by abdominal incision, with twenty-three recoveries. Fifty were operated upon by the lumbar incision, with twenty-seven recoveries.

Quénn concludes from his analysis of the cases that the abdominal incision is to be preferred for large tumors, and for displaced or movable kidneys, and that in other cases the lumbar incision is the best.

Further, that the lumbar incision should always be used in doubtful cases.

Weir reports another case of successful fixation of a movable kidney in the manner suggested and carried out by Hahn.[4] The kidney was cut down upon in the lumbar region, and its capsule attached to the edges of the wound by cat-gut sutures. The patient made a good recovery, and the symptoms were much relieved. Whether this method offers a permanent relief is still an open question.[5]

Polk[6] reports a case of congenitally displaced kidney in a malformed young woman, without uterus or vagina. The kidney was in the iliac region, and seemed to cause her much pain, especially at the menstrual periods, when it swelled, and was very tender. The hæmorrhage at these periods escaped apparently with the urine.

As the patient insisted on an operation to relieve the pain Dr. Polk removed the kidney by an incision in the iliac region. The peritonæum was not opened. The operation wound healed kindly, but the patient died at the end of eleven days. The autopsy revealed the entire absence of any kidney. That in a case of this sort the abdomnal incision would have been of great advantage by revealing the absence of the other kidney is evident to the retrospective reader.

The diagnosis of the condition of the other kidney when nephrectomy is thought of is of evident importance. If one ureter can be successfully compressed, and the bladder washed out, the urine then collecting while that ureter is still occluded must come from the other, and its examination will reveal the condition of that kidney.

A rectal lever similar to those used for controlling the iliac arteries has been tried for this purpose. Dr. Polk suggests the compression of the ureter between the beak of a much curved catheter introduced into the bladder and the fingers in the rectum. It must always, however, be a matter of doubt in a given case whether by either of these methods the ureter is actually controlled.

It is an interesting physiological and therapeutical observation that Dr. Polk's patient, under the liberal use of pilocarpine, could survive for eleven days without a vestige of renal excretion.

[3] Archiv Gen. de Medicine, December, 1882.
[4] N. Y. Med. Journal, February 17, 1883.
[5] Centralblatt f. Chirurgie, July 23, 1881.
[6] N. Y. Med. Journal, February 17, 1883.

DIGITAL DIVULSION OF THE PYLORUS.

From Italy comes a new abdominal operation, devised and performed by Professor Loreta, of Bologna, and reported by Dr. Harris.[1]

The operation consists in opening the stomach by a small incision near the pyloric end, introducing through this the fingers, and with them forcibly stretching the contracted pylorus.

The condition demanding this operation in Professor Loreta's cases was a stenosis of the pylorus caused by the cicatricial contraction of an ulcer. That he has within a few months met with four such cases indicates that this state of things is of more frequent occurrence in Italy than with us. Of his four cases two have recovered, and have been relieved of their symptoms; the other two, much exhausted at the time of operation, died of shock within a few hours.

REDUCTION OF DISLOCATED SHOULDER.

Dr. J. E. Kelly[2] describes a new method for reducing dislocations of the humerus. The patient is to be placed on his back on a hard couch so high as to bring his axilla about three inches below the trochanter of the operator when erect. The patient being brought close to the edge of the couch the dislocated arm is carried out at right angles with the trunk, and the operator places himself between the arm and the body, with his hip pressed firmly into the patient's axilla. He now wraps the arm firmly round his pelvis, and securing it there by firm pressure of one hand he rotates his body away from that of the patient, thus producing very powerful, but easily graduated, traction in the arm. The hand next the patient is left disengaged for any manipulations that may be necessary.

This method has the great advantage of being entirely in the surgeon's hands and under his control without the need of assistants.

SUBPERIOSTEAL AMPUTATION AT THE HIP-JOINT.

Mr. Shuter[3] showed a patient at the Clinical Society of London, February 9, 1883, whose leg he had amputated at the hip-joint in October, 1881. In view of the usefulness of the stump the method of amputating is worth considering. A circular amputation at the junction of the middle and upper thirds of the thigh was done, and followed by a longitudinal incision along the outer side of the femur down to the bone. The periosteum was stripped off with the flaps, and the bone enucleated. The patient, a young man of eighteen, with an inflammation of the hip-joint, accompanied by septic symptoms, made a good recovery, and was able to wear an artificial leg at the end of six months. The stump was of considerable length, and had a hard core, which was thought by Mr. Shuter to be new-formed bone. It was so firm, and the muscles had such control over it, that the boy could walk a mile and a half on his artificial leg without much fatigue.

Considerable difference of opinion prevailed among the surgeons present as to the existence of bone in the stump, but all agreed in admiring its shape and usefulness.

Mr. Barker cited a case in which he had done a similar operation in February, 1881, with a similarly good result.

It is interesting to note in this connection that of the successful hip amputations during our civil war[4] not a single patient was able to use an artificial leg to any advantage.

During the discussion of this paper Mr. Davy mentioned a case in which his rectal lever, applied by himself, had caused a rent in the rectum with fatal peritonitis. At the autopsy the man was found to have a very small meso-rectum.

That this accident should have happened in the hands of Mr. Davy himself suggests the importance of the greatest care in the use of the lever.

1 Philadelphia Medical News, April 20, 1883.
2 Dublin Journal of Medical Science, September, 1882.
3 British Medical Journal, February 17, 1883.

Reports of Societies.

REPORT OF THE THIRTY-FOURTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT CLEVELAND, OHIO, JUNE 5, 6, 7, AND 8, 1883.

SECTION IN OBSTETRICS AND DISEASES OF WOMEN.

FIRST DAY.

The meeting at Frohsinn Hall, No. 333 Superior Street, at 2.30 P. M., was very largely attended, there being present fully two hundred physicians. J. K. BARTLETT, of Wisconsin, acted as chairman, and G. H. MOSES, M. D., secretary. The first paper read was on

CHRONIC ENTERO-PELVIC INFLAMMATION,

by W. H. BYFORD, M. D., of Illinois. Dr. Byford said, in substance:—

The terms parametritis and perimetritis are erroneously supposed by many to include the whole subject of entero-pelvic inflammation. These terms are misleading, because, as now often used, they present to the mind the idea that all cases of inflammation not confined to the uterus must belong to one or the other of them. Actual observation teaches the important fact that perimetritis and parametritis usually exist together and are usually complicated with inflammation of the uterus, and not infrequently the ovaries and Fallopian tubes are involved; the obvious conditions of chronic parametritis and suppuration, or chronic pelvic abscess, located more frequently, but not always, in the broad ligament, are the consequence of cellulitis. The chronic pelvic abscess is generally the sequel of acute inflammation, and attains chronicity from the imperfect evacuation of the pus after acute inflammation has terminated in suppuration. The remedy in such cases is found in surgery and consists in making a more direct outlet through the vagina large enough to at once completely evacuate the pus and enable the surgeon to cleanse and disinfect the cavity. After citing several cases the writer drew a number of conclusions, specially emphasizing the danger of converting a chronic pelvic inflammation into a disastrous acute form.

The second paper was

POST-PARTUM POLYPOID TUMORS,

by Dr. HENRY G. LANDIS, of Columbus, O. The writer described four forms of this tumor:—

4 Medical and Surgical History of the War, part 3, vol. ii., p. 162.

(1.) Fibrinous blood clots gradually formed.
(2.) The same intermixed with fragments of placenta and membranes.
(3.) Prematurely detached stripes of decidua with blood clots.
(4.) Hypertrophied patches of dicidua.

The third paper,

THE RESTORATION OF THE PERINÆUM BY A NEW METHOD,

was by Henry O. Marcy, M. D., of Massachusetts. The writer remarked that the anatomy of the perinæum has, within the last few years, become fairly understood, the perineal body being now recognized as an anatomical utility, and as the keystone in the arch of perineal support. He presented a new method for repairing the perinæum by the use of lateral support. This is accomplished by the use of wire of German silver, which possesses elasticity sufficient to make lateral tension; and the ends are so bent that each forms a support with the other; thus a kind of "safety-pin" holds the refreshed parts in position.

SECOND DAY.

At the opening of the meeting Dr. E. C. Dudley asked permission to postpone the reading of his paper, which was granted. Owing to the absence of Dr. R. Beverly Cole, of California, and his paper on Subinvolution, its Causes and Treatment not being on hand, the next paper called for was Post-Partum Atrophy of Uterus, by J. Tabor Johnson, of the District of Columbia. Dr. Johnson also being absent, Dr. John Morris, of Maryland, read his paper on

WHAT MEANS CAN BE JUDICIOUSLY USED TO SHORTEN THE TERM AND LESSEN THE HOURS OF LABOR,

of which the following is a brief abstract: In describing lingering labor he divided it into three stages: first, when the head remains high up; second, when it has descended into the pelvic cavity, but the parts are tense and undilatable; and, third, when the child impinges on the perinæum. He explained the procedures to be used on all these conditions, and at what time to employ them. These procedures were, detaching the membranes around the cervix with the finger in the first stage; dilating with the pulpy part of the finger, and stretching it cautiously during each pain; forcible external compression, pushing the cervix over the occiput; the administration of opium and ergot, but never in first cases, and finally chloroform. These means all failing, the only alternative is the forceps. The doctor further said that if the means he suggested were employed, laceration of the os and perinæum, those *bêtes noir* of modern medical literature, would be obviated, and post-partum hæmorrhage, that greatest of all complications in labor, would be prevented. The above paper was discussed by Drs. McClure, of Pennsylvania; A. C. Gent, of Texas; Reamy, of Ohio; Smart, of Michigan; Gordon, of Maine; Martin, of Massachusetts; Montgomery, of Pennsylvania; Landis, of Ohio; Humiston, of Massachusetts; Robinson, of Pennsylvania; Ruvis, of Ohio; Horlic, of Ohio; Watkin, of Kentucky, and finally closed by the original speaker.

Dr. E. C. Dudley, of Illinois, read the next paper on The Immediate Application of Sutures in Puerperal Laceration of the Cervix and Perinæum, discussed by Drs. Harvey Walker, of Kentucky; E. W. Jenks, of Chicago; Morris, of Baltimore; Maughs, of St. Louis; Ulrich, of Pennsylvania, and Parson, of Detroit. The closing paper of the afternoon's session, by Dr. W. H. Taylor, of Cincinnati, was the report of a case of Laparo-elytrotomy in its various stages until its final development. At the conclusion of the last paper the meeting adjourned.

THIRD DAY.

The Section in Obstetrics and Diseases of Women met at Frohsinn Hall. Dr. P. Zenner, of Ohio, read a paper on the

VALUE OF GYNÆCOLOGICAL TREATMENT IN HYSTERIA AND ALLIED AFFLICTIONS.

He said that the occasional dependence of nervous disease upon female diseases, and successful results of the treatment of the same case, has unfortunately led to the too general advocacy of gynæcological measures in nervous diseases. It is time to recognize that such measures may do harm as well as good. Hysteria is essentially dependent upon a constitutional predisposition, often of hereditary origin. Disease of the uterus or ovaries may favor this predisposition by the general debilitating effect.

Many cases occur where the cure of the uterine disease does not affect the nervous malady; also, when the latter is cured by proper measures, while the uterine disease remains. The treatment recommended was naturally moral, hygienic, and constitutional, rather than local.

G. M. Maughs, M. D., of Missouri, read a paper on the

MIDWIFERY AND GYNÆCOLOGY OF THE ANCIENTS,

which showed that the physicians of the first century were familiar with many of the advanced ideas of modern gynæcology.

The Committee for Selections for Prize Essay was then appointed by the chairman, and announced as follows: Drs. L. F. Warner, of Massachusetts; H. D. Didama, of New York, and W. H. Byford, of Illinois. The Committee on Awards consists of Drs. J. C. Rust, of Ohio, T. A. Reamy, of Ohio, and G. M. B. Maughs, of Missouri.

SECTION ON DISEASES OF CHILDREN.

FIRST DAY.

In the Section on Diseases of Children, Dr. Charles W. Earle, of Chicago, read a paper on

CEPHALHÆMATOMA IN THE NEW-BORN.

The most important subject connected with the subject, the speaker said, was its diagnosis, and it appeared to him that there were four difficulties with which it was likely to be confounded, namely, caput succedaneum, congenital encephalocele or hernia cerebri, erectile tumors, and cranio-tabes.

As to the treatment of this difficulty, the speaker said the best method to be pursued was a judicious letting alone; nature, in a great majority of cases, being able to effect a cure without the aid of medical art.

SECOND DAY.

The first paper was by Dr. Alexander Y. P. Garnett, emeritus professor of clinical medicine in the National Medical College at Washington, on

EPIDEMIC JAUNDICE AMONG CHILDREN.

Dr. Garnett held that heat was one of the most important agents in the production of jaundice, not only among children, but among adults. He stated that he had noticed in his own experience during one summer, six cases of jaundice among children in Washington, all of which occurred between the first of July and the first of October. During the same summer several other physicians had cases which showed the same clinical conditions. He stated that, though jaundice sometimes occurs in the winter, the patient's system has been, during the preceding summer, fitted for the disease. French soldiers, he said, fighting in tropical countries, had been attacked by epidemic jaundice, large numbers dying, and the liver and spleen in each case were found to be enlarged and congested. The disease was attributed, by the army surgeons, to the intense and prolonged heat.

DR. LYNN, of Pennsylvania, said he had noticed a similar epidemic in the valley of the Monongahela. Few of the cases were serious, and nearly all recovered. He had observed that the disease was confined entirely to children. An entire family of children were affected, while those in an adjoining house escaped. He found that little treatment was necessary. There was no malaria in that section, and he was almost certain the disease was caused by heat.

The next paper was on

UNITY OF DIPHTHERIA AND MEMBRANOUS CROUP,

by DR. ALEXANDER HARRIS, of Virginia. Dr. Harris expressed the opinion that the diseases were identical, and that it was impossible to distinguish between the two. Diphtheria was claimed, he said, to be a disease of the pharynx, and croup a disease of the larynx, but his experience taught him that membranous croup originates in the larynx only in about ten or twelve per cent. of all the cases. "I think it may be assumed," he said, "that false membrane is as constant a result of diphtheritic inflammation or poisoning as the eruption in scarlatina or the pustule in smallpox is an effect of the poison upon which those diseases depend, and if this membrane is formed in the pharynx, I think I am safe in saying that we all consider it equally conclusive, as a diagnostic. It appears, then, only necessary to establish the identity of laryngeal with pharyngeal false membrane to make the former as conclusive a diagnostic as the latter." He held that the difference between laryngeal and pharyngeal false membrane cannot be detected with the naked eye, and microscopists, even, are unable to differentiate.

The paper called forth a spirited discussion, which was participated in by nearly all the physicians present, the assemblage being about evenly divided for and against the theory of unity. DR. CHARLES W. EARLE, who occupies the chair on children's diseases in a Chicago college, stated that he was frank to admit, after a practice of thirteen years, that he was unable to tell one disease from the other, or, in other words, that he thought they were identical.

THIRD DAY.

At the session of the Section on Children's Diseases the first paper was on

DENTITION,

by DR. A. H. GOOD, of Salem, Ind. Dentition is not properly classed as a disease, but the diseases which accompany it are numerous. From dentition and its accompanying diseases the mortality is greater than from all other diseases to which children are subject. Some children are more easily disturbed by teething than others, for the reason that they are not so strongly organized, or because of some peculiar susceptibility to its influence. At the extreme end of each tooth root is the foramen, through which passes the dental nerve, and during the growth of the tooth there an inflammatory action which, coming through the nerve agency, reflects with great power through the same channel, and is generally distributed through the sympathetic nerves. We then have, in addition to the tooth acting as a foreign body, a reflex nervous irritability. Our attention is first called to the teeth, and when the gums are swollen they should be divided to relieve pressure, pain, and inflammatory action. We have as concomitant a functional derangement of the stomach and bowels resulting from enervation, the sequela of the reflex nervous irritation, and displaying a yeasty and soured condition. This we may find upon microscopic examination to contain myriads of bacteria. The thermal ranges in these cases are various, in the acute form often rising to 103°, 104°, and 105° F. The pulse usually corresponds to the temperature. The speaker said he gives nervines for the disease proper, and for the secondary symptoms sub. nit. bismuth and pepsin.

In the discussion that followed, DR. REED, of Ohio, stated that he believed the reflex nervous action interrupted the working of the nerves of the stomach, and in consequence the secretions of the mucous membrane were cut off, the food would not digest, and hence diarrhœa ensued. He did not, however, endorse the bacteria or germ theory. He would lance the gums of the child to arrest nervous irritation, thus stopping the diarrhœa, and would then place the child on a particular diet. He would feed nothing but milk, and eschew all starchy food.

The next paper was by DR. J. B. CASEBEER, of Auburn, Ind., on

PÆDIATRIC MEDICATION AND ITS RELATION TO GENERAL MEDICINE.

The writer advocated greater care in apportioning the size of the dose to the age and condition of the infant, and said that more attention should be paid to employing agreeable vehicles for the administration of medicines. The treatment of children calls for the best efforts of the most scientific and skillful in our ranks.

Further discussion in this Section was chiefly on Infantile Paralysis, following a paper by DR. TEALE, and on the identity or diversity between croup and diphtheria, with special reference to the treatment of the latter disease.

SECTION OF DENTAL AND ORAL SURGERY.

FIRST DAY

In the Section on Dental and Oral Surgery a paper on

DENUDATION OR EROSION OF THE TEETH

was read by DR. JOHN S. MARSHALL, of Chicago.

This is a disease which attacks these organs, beginning with the enamel, and gradually involving the subjacent dentine, without any of the appearances or characteristics of dental caries. It consists of a general

wasting of the enamel and dentine, generally upon the labial and buccal surfaces, most often beginning with the incisors, though it may attack other teeth first, and may involve all of the teeth to the second molars. It usually begins at the gum, forming grooves or cavities which follow the curves of the gum lines. They are as evenly and smoothly cut as though made with a file or disk, are highly polished, perfectly hard, and many times absolutely free from discoloration. The surface of the grooves is generally quite sensitive, sometimes exquisitely so, causing the patient much uneasiness and pain. Occasionally the process begins at numerous irregular points on the labial surface, which extend, and after a time coalesce, involving the loss of the entire enamel wall of the surface. The disease progresses in rare cases as far as the pulp, laying that organ bare, while in the majority, nature provides against it by filling up the pulp chamber with secondary dentine, and thus protecting it from exposure.

SECOND DAY.

The Section on Dental and Oral Surgery met at the Vocal Society Rooms. Dr. Williams acted as chairman instead of Dr. Goodwillie, whose case is under advisement of the Judicial Council. In the absence of a regular programme, Dr. John Marshall reported a curious case of

PYRRHEA ALVEOLARIS

treated by himself and Dr. W. W. Alport, his professional associate. In this case the alveolar processes surrounding the anterior upper teeth upon the labial surface were destroyed, the teeth being very loose, and the roots distinctly felt through the gums. There was a very profuse discharges of pus, and a probe could be passed from the margin of the gums to beyond the apex of the left lateral incisor and left canine, forming a pocket above. The other teeth were affected in a less degree, the loss of osseous tissue extending from the margin of the gums to the junction of the middle and upper third of the roots. The case was treated by thoroughly scraping the roots of the teeth and the diseased edges of the alveolar process with chisels made for the purpose and afterwards injecting dilute aromatic sulphuric acid, and later on phenic acid in solution.

The case, when discharged, after being under treatment for about three months, was entirely cured, the teeth were firm, and the lost osseous tissue about the apex of the teeth was seemingly restored.

Dr. Eugene S. Talbot, gave the history of two cases of blood-poisoning from alvolar abscesses.

The Section adjourned after nominating officers for the ensuing year. The nominees are: For chairman, Dr. T. W. Brophy, of Illinois; for secretary, Dr. John S. Marshall, of Illinois.

THIRD DAY.

The Section on Dental and Oral Surgery met with Dr. W. W. Allport, of Chicago, ex-President of the American Dental Association, acting as chairman in the absence of Dr. Goodwillie.

Dr. George D. Parmelee read a paper on Diseases of the Maxillary Sinus.

Dr. John Marshall read a paper prepared by Dr. W. W. Allport, of Chicago, in which a case of

AMAUROSIS DEPENDENT UPON DENTAL IRRITATION

was related, extending over a period of two years. Ophthalmologists who were consulted on the subject were entirely unable to find a cause for the difficulty, and no one seemed at all to understand the case. Finally the lady so affected applied to her dentist, who found that the trouble lay in partial calcification of the pulp, which was finally removed entire, and the pulp canal permanently filled.

Dr. Marshall reported for the committee appointed to consider the

APPOINTMENT OF DENTAL SURGEONS IN THE ARMY AND NAVY

that there had been a misunderstanding in presenting the matter to the Surgeons-General of the Army and Navy. It is intended to ask their coöperation in gathering statistics of dental diseases among soldiers and sailors, that data may be obtained on which to base an opinion of the needs of the service for such surgeons. On motion of Dr. Williams the committee was continued.

SECTION OF STATE MEDICINE.

FIRST DAY.

The Section in State Medicine met at the United States Court Room in the Post Office building. The only paper read was that of Dr. Albert L. Gihon, of the United States Navy, on

MEDICAL EDUCATION THE FUNDAMENTAL FACT IN MEDICAL ETHICS.

Beginning with a reference to the moot point in ethics, the reader declared his conviction that professional incompetence should be made the only ground for disfellowshipping any medical practitioner, and claimed that not sufficient attention was paid to securing a thorough medical education even among regular physicians. It was taking too much for granted to assume, as does this Association, that a "regular medical education is presumptive of professional abilities and requirements." Allusion was made to the experience of the Government Examining Boards. Of 1141 candidates for the medical corps in the twenty years since 1853 only 370, or about thirty-two per cent., have been accepted. . . . The examiners have not declined the application of any candidate, but have examined homœopaths and eclectics and graduates of no college when they presented themselves. None of these persons have been passed on account of their incompetence, but the speaker admitted that they had no lack of peers in ignorance among the alumni of institutions of the greatest renown and regularity. Many instances of such incapacity were given. The speaker urged a hearty support of the attempts of a few colleges, notably Harvard and the University of Pennsylvania, to raise the standard of medical education. These efforts will avail little so long as the Association unconcernedly witnesses and indirectly countenances the wholesale manufacture of doctors elsewhere, by accepting their membership without question of their competence. The time has come when something more than paper bulwarks shall be considered defense for our orthodox stronghold, and paper partitions sufficient to separate the sheep from the goats.

SECOND DAY.

The Section on State Medicine met at the Young

Men's Christian Association Chapel, with the chairman, DR. FOSTER PRATT, of Michigan, in the chair.

DR. H. A. JOHNSON, of Chicago, read a paper on

THE WORKING OF THE ILLINOIS STATE BOARD OF HEALTH.

Dr. Johnson opened his address with the statement that this board is no longer an experiment; with the close of this month will end the sixth year of its existence. During these six years it has at least met the expectations of those who were most active in promoting its formation. He then gave a synopsis of the work of the Board since its organization, July 1, 1877. There are on the Board beside the so-called regular physicians one homœopathic physician, one eclectic physician, and two laymen. Dr. Johnson stated that there has been some criticism of this composition of the Board, but that has been mostly disarmed by the result of the working of the Board, for a large number of irresponsible quacks have been driven from practice in the State. Few advertising or itinerant quacks now remain in Illinois. Where, in 1877, there was one so-called doctor to every 399 persons in Illinois, now there is only one doctor to every 620 people. Dr. Johnson concluded his address as follows: "In its work the Board has promptly utilized all available agencies, and alike in the protection of our southern extremity from yellow fever, through its connection and influence with the Sanitary Council of the Mississippi Valley, as in guarding our eastern boundary from imported small-pox, through the emigrant inspection system of the National Board of Health, it has demonstrated the feasibility of a public health service in entire consonance with any or all political theories, whether of 'States rights' or 'national sovereignty.' Possibly this was to be expected of a State whose coat of arms bears both these mottoes. It is none the less gratifying, however, to discover an organization capable of defining State medicine in a cosmopolitan spirit, and thence to avail itself as quickly of the resources of the Federal treasury and national authority on the one hand, as of the moral and material support of a volunteer coöperation on the other." The reading of this paper was followed by an earnest discussion.

DR. JOHN H. RAUCH, secretary of the Illinois State Board of Health, with DR. JOHNSON, answered numerous questions asked them concerning the board.

DR. HOPKINS, of New York, said that he considered it inconsistent in the American Medical Association that there should be a body of physicians in Illinois who, acting with eclectics and homœopaths, license eclectics and homœopaths, while the whole world is turned upside down because the New York Association only proposes to adopt a new code of ethics, while practically such a new code is in operation in Illinois.

DRS. JOHNSON and RAUCH maintained that the code is not violated by the doctors on the Illinois Board of Health, but that they simply act with the two so-called irregular physicians on that board in an official capacity, as they would with any citizens appointed on it.

SECTION OF OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY.

FIRST DAY.

The Section on Ophthalmology, Otology, and Laryngology met in the Board of Education Rooms. DR. LAWRENCE TURNBULL, of Pennsylvania, read a paper on the Paralysis of the Facial Nerve as Connected with Ear Diseases, which was largely discussed.

DR. W. C. JARVIS, of New York, presented a paper on Removing Enlarged Tonsils without hæmorrhage by Means of his Snare.

A paper on the

ACTION OF NITRATE OF SILVER ON THE MUCOUS MEMBRANE OF THE THROAT AND NOSE,

by CARL SEILER, M. D., of Philadelphia, in which he stated his opinion that nitrate of silver was not a caustic, drew forth much discussion, the majority of those present agreeing with the author's theory.

SECOND DAY.

At the Board of Education Assembly Room in the Public Library Building the Section on Ophthalmology, Otology, and Laryngology held its second day's session, beginning at 2. 30 o'clock, with President Chisholm in the chair. After the reading of the minutes of the previous session the President appointed Drs. Conner, Williams, and Seiler a committee on publication, after which DR. LAWRENCE TURNBULL, of Pennsylvania, read a paper on

TINNITUS AURIUM AND DEAFNESS WHICH ACCOMPANIES THE DIFFERENT FORMS OF BRIGHT'S DISEASE,

in which he stated that in all cases of Bright's disease ear symptoms are present, and especially in that form in which fatty degeneration of the kidneys has taken place. The paper was quite freely discussed by Drs. Frothingham, of Ann Arbor, Mich., Coser, of Williamsport, Penn., Connor, of Detroit, and Turnbull, of Philadelphia. DR. J. L. THOMPSON, of Indianapolis, then read a paper on Questions on the Ætiology of Some Forms of Lenticular Opacity, describing a peculiar opacity in the lower periphery of the lens, which comes on suddenly and remains unaltered for years, causing blindness, but differing from cataract. The doctor said that he was ignorant of the cause, but had found it in cases of diabetes. In the discussion which followed DR. NOYES, of New York, said he had seen similar cases, and they were not infrequently associated with myopia, of molecular form. There was another class of cases, the cause of the opacity being choroidal retinitis, occurring more frequently in the lower periphery of the lens, and the doctor thought it was due to alteration in the nutrition of the hexagonal epithelium.

DR. HOWE, of Buffalo, said that opacity of the lens was frequently absorbed by tearing the capsule.

The next paper read was a Case Illustrating the Segmental Feature of Glaucoma, by DR. H. CULBERTSON, of Ohio, in which its author discussed the causation of glaucoma.

A prolonged discussion of the discourse ensued, following which DR. ROE, of Rochester, N. Y., read a paper on

NASAL DISEASE AS A CAUSE OF ASTHMA,

in which he showed that nasal obstruction or irritation of the mucous membrane would give rise to severe attacks of asthma. DR. SEILER, of Philadelphia, opened the discussion by saying that he had had cases under treatment in which the touch of the probe to the diseased spot had caused an attack of asthma, and that the cure was to cauterize the spot. He said, in addition,

that hay asthma or, as it is commonly called, "hay fever," was due to the same cause, and could always be cured by removing the chronic nasal irritation which is aggravated by the pollen always floating in the air in early autumn.

Dr. FROTHINGHAM, of Ohio, said he could not see that these cases differed from any ordinary cases of inflammation of the bronchial tubes.

At 5.45 P. M. an adjournment was had.

THIRD DAY.

We have space to mention only the paper by DR. RUMBOLD, of St. Louis, on the

APPEARANCE OF THE MUCOUS MEMBRANE OF THE THROAT AND NOSE IN ADULT PATIENTS.

He stated that the inflammatory process in mucous membrane produced different appearances in patients of different ages, and that in smokers the color of the mucous membrane, and especially of the vocal cords, is always abnormal. He said also that in most cases of irritation of the throat the cause was to be looked for in disease of the naso-pharyngeal space. In the discussion which followed DR. SEILER, of Philadelphia, said that he agreed with the author of the paper as to the cause of chronic laryngitis, and that it would get well if the nasal catarrh were cured. As to the discoloration and disease of the vocal cords in smokers he differed from Dr. Rumbold, and said that his experience had shown him that cigarette smokers were always affected with chronic laryngitis, because of inhalation of the smoke; but cigar and pipe smokers were never so affected.

THE CONFERENCE OF THE DELEGATES APPOINTED BY THE BOARDS OF CENSORS FOR THE DISTRICT MEDICAL SOCIETIES OF THE STATE OF MASSACHUSETTS.

THE conference of the delegates from the Boards of Censors of the District Medical Societies throughout the commonwealth met June 11th, at 19 Boylston Place. Twelve members were present, accredited to the various societies. Dr. John Crowell of Essex North District was chosen chairman and Dr. Albert N. Blodgett, of Suffolk, clerk.

METHODS OF EXAMINATION.

The first business was the report of the committee appointed last year for the purpose of ascertaining the methods employed by the various Boards of Censors in the State in order to compare these methods and to adopt some system which shall be more nearly uniform in the various sections of the Commonwealth and more thoroughly conform with the requirements of the By Laws of the Massachusetts Medical Society than has heretofore been the case —

After a few introductory remarks the following report was presented: —

The Committee appointed at the conference of Censors held in Boston, June 14, 1882, to "ascertain the methods of examination used by the several Boards of Censors etc." submit the following report.

In the early part of May the following note was mailed to the secretary of each District Society: —

MASSACHUSETTS MEDICAL SOCIETY.

To DR. ——

Secretary ——— ———, *District Society.*

Dear Sir, — At a conference of censors held in Boston, June 14, 1882, it was voted — "That a Committee of three be appointed, whose duty it shall be to ascertain the methods of examination used by the several Boards of Censors, and to request the censors to make such suggestions upon this subject as may occur to them."

An answer is respectfully requested before June 1st.

The Committee would urge upon your Board the importance of sending two delegates to the Conference of Censors to be held in Boston during the next annual meeting of the Massachusetts Medical Society.

J. T. G. NICHOLS, Middlesex South.
GEORGE C. MCCLEAN, Hampden.
B. H. HARTWELL, Worcester North.
Committee.

Answers have been received from the following districts: Barnstable, Bristol North, Bristol South, Essex North, Essex South, Hampden, Hampshire, Middlesex East, Middlesex South, Plymouth, Suffolk.

For the Committee,
J. T. G. NICHOLS, *Chairman.*

The Barnstable District Medical Society appointed me to answer this communication. I can only say that our Society has endeavored to comply with all the requirements of the parent society in regard to admission of new members. Aside from documentary evidence (diplomas), we invariably institute a thorough oral, and frequently a written, examination, and pay particular attention to the Practice of Medicine and Obstetrics. We choose to insist upon a thorough practical examination rather than one directed to details of a more minute character. The fact that our society frequently rejects an applicant, I think is evidence of our thoroughness.

Very respectfully yours, BENJ. D. GIFFORD,
for Barnstable Distrtct Medical Society.

May 12, 1883.

TAUNTON, *May* 24, 1883.

DR. J. T. NICHOLS:

Dear Sir, — The mode of examination for the Bristol North District is as follows, viz.: two written questions are submitted by each censor (each censor having a particular branch) to each candidate for admission. The answers to be in writing. If time permits, an oral examination follows the written. Hoping you will pardon delay in answering,

I remain yours, etc.,
E. F. GALLIGAN, *Secretary.*

NEW BEDFORD, *May* 29, 1883.

DR. J. T. G. NICHOLS:

Dear Sir, — In answer to your letter, I will state that it is the custom with our district society to require a written application from the candidate. This application is handed in six months before he comes up for examination.

Our object in doing this is to make inquiries in regard to his character and standing in the community and with the profession. Our examinations are conducted orally. Each censor examines the candidate on one or more branches, and then if he has a majority of the votes of the censors he is admitted.

The voting is by ballot.

Our questions are mostly of a practical character.

Very truly yours,
A. MARTIN PIERCE,
Secretary Bristol South District Medical Society.

NEWBURYPORT, *May* 11, 1883.

DR. J. T. G. NICHOLS:

Dear Sir, — In reply to your circular, I am happy to state that the censors of the Essex North District Medical Society give candidates for admission to the society a practical oral examination in those branches which are taught in the recognized medical colleges. Drs. John Crowell of Haverhill, and J. F. Terry of Newburyport have been appointed delegates to the Conference of Censors to be held in Boston during the next annual meeting of the Massachusetts Medical Society.

Yours, respectfully,
GEORGE W. SNOW, *Secretary.*

Dear Doctor, — The note from your committee, asking about our methods of examination, etc., was duly received.

In our examination we follow strictly Article I. of the By-Laws of the State Society; that is, we require candidate to exhibit diploma, and to show that he possesses the other qualifications specified in Article I. We then examine upon the several branches named, — each member of the Board being present, and hearing every answer given, — usually asking from five to ten questions upon each subject. We have usually confined the written part of the examination to the writing of prescriptions and reports of cases. Each candidate is examined in private, and a vote taken by the Board upon his admission.

Very truly,
T. KITTRIDGE,
for Essex South District.

DR J. T. G. NICHOLS, Cambridge, Mass.:

My Dear doctor, — Your favor received. My suggestion was not material, and your circular, as you say, covers the ground. It occurred to me, after writing, that you might have struck off your copies. The Committee of Councillors, to which you referred, and of which I was a member, after mature deliberation, got round to their starting-point, and recommended that existing laws be enforced, as you know.

I report for our district by sending you a copy of the questions used at our last meeting. There were three candidates, only one of whom was admitted, the other two will come up again in October. We mean business, and hope to keep the standard up here, at our end of the State.

Sincerely yours,
GEO. C. MCCLEAN.

SPRINGFIELD, *May* 18, 1883.

TO DR. J. T. G. NICHOLS:

Dear Sir, — Your communication from the committee of Censors is at hand. In reply I would say that nearly all the men who present themselves for examination are men well known to the Board, whom we are anxious to pass with a merely formal examination: men with diplomas from first-class schools.

When others present themselves, which has never been the case within my recollection, they are examined with care. I would also call your attention to the fact, that the advantages of belonging to the "Hampshire District Branch of the Massachusetts Medical Society," are not apparent to most of the physicians about here, and our greatest difficulty is in inducing the good men to join us, not in keeping the bad men out.

If you legislate for this part of the State on the assumption that any one is, or is likely to be, hungering and thirsting to join the Society, you will make a sad mistake.

Yours truly,
CHAS. W. COOPER,
Sec. of Censors for Hampshire.

READING, *June* 6, 1883.

DR. J. T. NICHOLS:

Dear Sir, — Our Censors have no suggestions to offer your committee.

The Board will be represented at the meeting called for June 14th.

I appreciate the importance of concerted action in the matter of elevating the standard for admission into our Society.

Respectfully yours,
GEORGE E. PUTNEY,
Secretary, Middlesex East District.

BROCKTON, *May* 9, 1883.

DR. NICHOLS:

Dear Sir, — In answer to your letter, as to the method of the different Boards of Censors in the examination of candidates, I will simply write that the examination of candidates, in the Plymouth District Medical Society, is generally a written one, but sometimes it is partly written and partly oral.

Each candidate has two questions in each branch of study, and each of the Censors takes one or more of the branches of studies from which he formulates the questions.

Generally the examination lasts about two hours, after which the papers are examined, each Censor examining those which he furnished. Upon the result of the examination depends the admission or rejection of the candidates, provided their moral character, etc., are right.

In regard to the sending of delegates to the conference of Censors during the annual meeting, as there will be no more meetings of our society until July, I will take the liberty of naming Drs. H. F. Borden of Brockton, and H. W. Dudley of Abington as delegates.

I suppose they will receive proper notice of the time and place of holding the meeting.

Yours truly,
J. E. BACON,
Secretary of Plymouth D. M. S.

The Censors of the Middlesex South District, having found that a candidate is qualified for examination, subject him to an oral examination in the branches of study specified in Article I. of the By-Laws of the Massachusetts Medical Society. Certain branches of study are assigned to each Censor. Of late years, a few written questions in two or more branches have been given. A ballot is then taken upon the admission of the candidate. A majority of the present Board of Censors are in favor of making the written examination still more prominent. They think it quite as fair to the candidate as an oral examination, while it gives the Censors written evidence of the justice of their decision, should it be adverse to the candidate.

J. T. G. NICHOLS, *for the Censors.*

19 EXETER STREET, *May* 9, 1884.

My dear Sir, — In reply to your committee's inquiry I would report that the method of examination, pursued by the Suffolk Board of Censors, is as follows: —

(1.) The applicants first present their diplomas to the Secretary, who presents them to the Board. The Board then vote whether or not to admit said applicants to examination.

(2.) The examination consists of an oral examination of each candidate by each Censor for from three to five minutes.

The division of branches among the different Censors, *i. e.* of the subjects upon which it is required by By-law I. of the Massachusetts Medical Society, that each candidate should be examined, is by mutual consent.

The written examination is then held, the paper consisting of two questions from each Censor, or sometimes only one; the time allotted for this examination is two hours. The books in which the candidates write are numbered and sent to the different Censors, to mark, who thus do not know the names of the men whose books they mark. At a subsequent meeting the marks are handed in, the oral and the written added together, and divided by two. No candidate falling below fifty per cent. is admitted, but the Censors do not consider themselves bound to admit those averaging over fifty per cent., if there is anything prejudicial to their moral character known.

I inclose a specimen examination paper.

Very respectfully, H. C. HAVEN,
Secretary Suffolk District Board of Censors.

CENSORS' EXAMINATION, JUNE 2, 1881.

(1.) Give the position and relations of the kidneys.

(2.) Diagnosis and treatment of impacted fracture of lower end of radius.

(3.) State the uses of opium; action; forms; doses; active principle; antidotes.

(4.) What is a tonic? a stimulant? an escharotic? an emetic? a sedative? a cathartic? Give examples of each.

(5.) What organs are concerned in digestion, and what part is played by each in the process?

(6.) Classify Phthisis, and describe briefly the gross appearances of the most important changes found in the viscera.

(7.) Give the diagnostic points which distinguish *accidental* and *unavoidable* hæmorrhage at the time of labor.

(8.) How is an *arrest* distinguished from an *impaction* of the head within the cavity of the pelvis?

(9.) Describe what you consider to be the proper method of disposing of the drainage of an inland country house 60 × 50 feet, standing on a lot of two acres, and dependent for its water supply on a well ten feet from the house. [There is no stream of water in the vicinity.]

(10.) Give the symptoms of, and the differential diagnosis between, Dilatation of the Heart and Pericarditis with Effusion.

CENSORS' EXAMINATION, JUNE 7, 1883.

(1.) Give the contents of the right iliac region, and their relations.

(2.) What are the varieties of club-foot — their causes and treatment?

(3.) Describe the process of digestion.

(4.) Enumerate and briefly describe the appearances of the chief affections of the lungs.

(5.) Whence are Arsenic, Iodine, Mercury, derived? Method of preparation? Forms of each for medicinal use? Signs of poisoning from each, and antidote.

(6.) What is a stimulant? A tonic? A sedative? An emetic? A cathartic? Action of each, with written prescriptions, and directions for use?

(7.) Give the differential diagnosis between dysentery and catarrh of the large intestine.
(8.) Describe a case of acute capillary bronchitis, with directions for treatment.
(9.) Give a brief outline of a normal labor.
(10.) Name any very dangerous complication which might arise during or after a birth, and say what you would do.

HAMPDEN DISTRICT MEDICAL SOCIETY.

WRITTEN EXAMINATION, HELD APRIL 17, 1883.

ANATOMY.

(1.) Describe the hip joint.
(2.) Describe the male urethra.
(3.) Describe the female perinæum.

PHYSIOLOGY.

(1.) Composition and functions of the gastric juice.
(2.) What is respiration?
(3.) Functions of the anterior and posterior columns of the spinal cord.
(4.) Functions of the sympathetic.
(5.) Functions of the cerebrum.
(6.) Forces producing the circulation of the blood.

GENERAL CHEMISTRY.

(1.) Sulphuric Acid, give composition, preparation, and compounds.
(2.) Preparation of Hydrogen.
(3.) Compounds of Iodine.

MATERIA MEDICA AND THERAPEUTICS.

(1.) Action and doses of (*a*) Iodine, (*b*) Iodide Potass.
(2.) Citrates and acetates, how changed in the system.
(3.) Action and doses of (*a*) Aconite, (*b*) Pilocarpine, (*c*) Belladonna and Atropia.
(4.) Name and give doses of mercurials in common use.
(5.) Action of Opium. Give its alkaloids, and doses of principal ones.

MEDICAL CHEMISTRY.

(1.) Varieties and appearance of urinary calculi.
(2.) Blood corpuscles, how distinguished.
(3.) Tests for Arsenic.
(4.) Tests for Albumen.
(5.) Tests for Sugar.

PATHOLOGY.

Give pathology and morbid anatomy of.
(1.) Stricture of the urethra.
(2.) Pneumonia.
(3.) Rheumatoid arthritis.
(4.) Typhoid fever.

THEORY AND PRACTICE.

(1.) Diagnosis and treatment of acute articular rheumatism.
(2.) Differential diagnosis of intercostal neuralgia and pleuritis.
(3.) Diagnosis of apoplexy.
(4.) Differential diagnosis of true croup and capillary bronchitis.
(5.) Diagnosis and treatment of pneumonia.
(6.) Diagnosis of chronic Bright's.

SURGERY.

(1.) Hernia, varieties, diagnosis, and treatment.
(2.) Dislocation of the shoulder joint.
(3.) Describe ischio-rectal abscess, and how treated.
(4.) What are the secondary symptoms of syphilis?
(5.) Removal of foreign bodies from the ear.

OBSTETRICS.

(1.) At eight months, os undilated; liquor amnii escaped; no pains; no flowing: give the treatment.
(2.) Treatment of post-partum hæmorrhage.
(3.) Diagnosis of twin pregnancy.
(4.) Treatment of prolapse of the funis.
(5.) Treatment when an arm is found in the vagina.
(6.) What are the usual signs of pregnancy?

It was voted that the report of the committee be received and placed on file.

Dr. Blodgett spoke of the increasing interest manifested by the Censors of the District Societies in the comparison of methods, and the great manifest diversity still existing in the requirements of the several Boards. The supposed existence of great diversity of opinion upon this point was the reason for calling the first general conference of censors, and the able manner in which the committee of last year has acquitted itself in the delicate mission which was intrusted to it, has proved the need for a nearer approach to some definite standard of excellence as the requirement for admission to the Massachusetts Medical Society, which shall find application throughout the State.

SPECIAL MEETING OF DISTRICT CENSORS.

Dr. Sabine, delegate from Norfolk, stated that at the conference of last year his society was not represented, owing to the fact that the then chairman took the ground that, according to the By-laws of the Massachusetts Medical Society, the Board of Censors could not appoint delegates to the meeting. The annual meeting of that society is held in May of each year, and delegates cannot be appointed to attend the June meeting without the calling of a special meeting of the Censors of that district for this purpose. In the view of the chairman this could not be done, and therefore the Norfolk Society was without representation at that time. Much good could doubtless be accomplished by meetings of delegates from the various local boards for consultation and comparison.

Dr. Nichols, of Middlesex South, remarked that the Censors of the district societies were only allowed to hold meetings at the same time and place as the stated meetings of the district societies. No special meeting can be called for any purpose whatsoever.

Mr. Blodgett proved from the records of the Suffolk Censors that a special meeting for the examination of candidates was held on certainly one occasion at a different date from either of the times specified in the By-laws; and there seems to be no good reason why such special meetings should not be held whenever the duties of the Censors toward the State Society demand.

Dr. Cutter, of Middlesex South, stated that he has studied the by-laws, and finds nothing therein to prohibit the holding of special meetings of the Board of Censors. Acting upon this ground, the Censors of his district held such a meeting, and were held to account for the same by the then President of the Massachusetts Medical Society, Dr. Williams, who contended that the By-laws did not allow the Censors to meet at other than the periods stated in Art. xx.

Dr. Crowell has until recently supposed that no meeting of Censors could be adjourned, and thought that no special meeting could be called.

Dr. Nichols said that the Censors were subject to a fine for failing to meet for the examination of candidates at the times specified in the By-laws. The Censors for his district held a special meeting for the examination of a candidate and were overhauled by the President of the State Society and mulcted in the amount of the fee for examination, which has never yet been paid by the treasurer. The conflict was with the President of the State Society, not with the Society itself. Dr. Cotting, of Norfolk, has always been very positive that the Censors could hold no special meetings, and in those days they were not even allowed to adjourn

Dr. F. C. Shattuck, delegate from Suffolk, presented the following motion, which was unanimously carried: Voted, "That in the opinion of this meeting, the Boards of Censors of the District Societies are at

liberty to hold special meetings at their pleasure, whether for the examination of candidates or for any other business within the scope of their functions."

Voted, "That the secretary of this meeting be requested to present this recommendation to the Board of Councillors of the Massachusetts Medical Society at their approaching meeting, in the urgent hope that they may consider the subject and take favorable action thereon."

CHARACTER AND PURPOSE OF EXAMINATIONS.

DR. SHATTUCK stated that in a former meeting of delegates from the various boards, the fact was learned that the greatest laxity existed in the examination of candidates, and that the By-laws were in no sense complied with.

DR. CUTTER, of Middlesex South, observed that we may err in one direction as well as in the other. The effort of the Censors should be to gain all good men, and to exclude only those who are unworthy. Many members of the profession are no doubt excluded from the society from a feeling of humiliation accompanying the examination.

DR. NICHOLS said that he could not agree with the remarks of the last speaker. The examinations are no more than any young man just out of college should pass. In his own (Middlesex South) Society a young man — a graduate within a year from a medical college — presented himself for examination before the Censors. In certain branches his examination was satisfactory, in some others it was very unsatisfactory, and he was not allowed to pass. Some feeling now exists in regard to the justice of the rejection of this gentleman. Had some part of the examination been conducted in writing, the Censors would have been able to present a much clearer defense of their action in excluding this candidate from the Massachusetts Medical Society. The written examination may be more tedious, but it is much more satisfactory. If the examination is printed, as in the Suffolk District, the amount of labor is much modified, it is fairer for the candidates, and is a record of the degree of rigor of the examination.

DR. HAMMOND, of Hampden, said that he hoped to gain a clearer idea of the duties of Censors. He felt that in his district injustice had been done toward one or two gentlemen who presented themselves for examination. The candidates were kept busy from eleven till four o'clock, but failed to pass. One of these men has been in practice for some years in another State, and was rejected because he could not answer the questions of the Censors.

DR. CUTTER thought it wrong to send the names of unsuccessful candidates to all the Boards of Censors in the State as is now done.

DR. DAVIS, of Worcester, said that the present method of examination is obstructed by want of time. In his district a written examination of a practical character is first held, and afterward a private oral examination, followed by an election to membership by ballot.

DR. RICH, of Worcester, thought the aim of the Society should be to win all *good* men. It might be wise to require a candidate to be a resident of the district for two years before admission to the Society, in order that he might become known to the Censors. There is an increasing interest in the Worcester District in a standard of examination, which shall be uniform and of a suitable character.

DR. SMITH, of Berkshire, stated that in his district the Censors' examinations were the flimsiest he had ever known of; but that the character of the candidates was beyond reproach. The Berkshire Society is an earnest, active society. The presidents of the State Society can testify to the character of the Berkshire members. In that district the moral character of the candidates is first investigated; then the source of the diploma is ascertained. No questions, such as are used in Suffolk, are employed. We ignore some of the requirements of the By-laws. One recent candidate knows nothing of Latin, but is a successful practitioner in Sheffield. We don't know how he writes his prescriptions. We think that all men of good moral character and fair education should be gathered into the Society. At present it numbers about fifty men — the strong, working elements of the profession in that district, who are growing with the times, and are a bulwark of strength for the Society.

DR. SABINE, of Norfolk, spoke of the desirability of a uniform standard for the successive Boards of Censors in the same district, instead of having a hard examination at one time, and a much easier one at another. The same Censors always examine upon some subject assigned to them during their term of service. In Norfolk District twenty-five per cent. of the candidates of recent years have been rejected. Another desirable thing would be a full board at every meeting of the Censors. Three members constituting a quorum at present, it is possible for two of the Censors to reject a candidate for membership in the State Society. Adjournments of the Board are otherwise necessary, and the Censors as well as the candidates are put to much inconvenience.

DR. CROWELL stated that the greatest reason for special meetings was found in the length of time required for the examination of the candidates on the day of the stated meetings of the Societies, by which the Censors as well as the candidates are prevented from participation in the proceedings of the Society.

DR. SHATTUCK thought that a great deal of good had come from the meetings of the Censors for conference. He then made the motion "that the committee of last year be continued for the purpose of watching the results of their action during the past year, and be requested to make a report upon the same subject at the next Conference of Censors." The motion was adopted.

On motion of Dr. Shattuck it was voted "that a copy of the minutes of this meeting be transmitted to the several Boards of Censors in the State, with the request that delegates be appointed from each Board to the next annual meeting. Adjourned.

ALBERT N. BLODGETT,
Clerk.

RHODE ISLAND MEDICAL SOCIETY.

The seventy-second annual meeting of the Rhode Island Medical Society was held in Lyceum Hall, Providence, June 21, 1883. About one hundred Fellows attended.

The meeting was called to order by the President, DR. JOB KENYON.

REPORTS OF SECRETARY AND TREASURER.

The annual report of the Secretary states the active membership to be one hundred and eighty-five.

The Treasurer, Dr. C. H. Leonard, submitted his annual statement, of which the following is a summary: Receipts, $1,083.21; expenditures, $723.19; balance, $360.02. The Society voted to add $400.00 to the Printing Fund, which, during the past year, increased to $1,075.

Dr. S. S. Keene, Secretary of the Board of Censors, announced that five applications for membership were before the Board, and would be reported upon at the quarterly meeting in September.

Dr. C. W. Parsons presented the

ANNUAL REPORT OF THE TRUSTEES OF THE FISK FUND.

No award is made on the subjects proposed for the year 1883.

Essays are invited on the following subjects for the year 1884: —

1. The Origin and Progress of the Malarial Fever now prevalent in New England.

2. Original investigations in Household Hygiene. For the best dissertation on either of these subjects worthy of a premium, they offer a prize of $300 on the usual conditions.

Dr. H. G. Miller, Chairman of the Publishing Committee, read his report.

REPORT OF THE LIBRARY COMMITTEE.

Dr. T. Newell, for the committee who have charge of the library, read the annual report on this important enterprise. Four hundred and nine volumes were added during the past year by gift, exchange, and purchase. The collection now comprises two thousand five hundred and three volumes, and is much used by Fellows of the Society. Rare or costly books are reserved as works of reference only, but the larger portion of the books circulate freely. The library has suffered no loss by this policy, which is much more convenient to busy practitioners than an exclusively reference-library could be. The Committee express their gratitude to Dr. Herbert Terry for his daily attention to the library, and particularly for the indispensable card-catalogue which he has prepared with great completeness and accuracy.

OFFICERS FOR 1883–4

were elected as follows: —

President, Job Kenyon; Vice-Presidents, Oliver C. Wiggin and Horace G. Miller; Secretary, George D. Hersey; Treasurer, Charles H. Leonard; Censors, Ariel Ballou, Otis Bullock, J. H. Eldredge, George P. Baker, J. W. C. Ely, Lloyd Morton, S. S. Keene, Benjamin Greene; Publishing Committee, George W. Porter, Robert F. Noyes, and Charles D. Wiggin; Committee on the Library, T. Newell, O. C. Wiggin, G. D. Hersey, H. G. Miller, G. W. Porter; Dinner Committee, C. H. Leonard, G. H. Kenyon.

Drs. D. H. Batchelder and Ariel Ballou reported verbally as delegates to the Cincinnati meeting of the American Medical Association.

Dr. H. G. Miller gave an interesting account of the annual meeting of the Massachusetts Medical Society.

Dr. W. S. Bowen read a report of his visit to Concord as delegate to the New Hampshire Medical Society, Dr. A. G. Browning reported as delegate to the Connecticut Medical Society, and Dr. N. O'D. Parks as delegate to the New Jersey Society.

The President introduced as visiting delegates, Dr. W. N. Stone, representing the Massachusetts Society, Drs. C. M. Carleton and R. M. Griswold, of Connecticut, and Dr. H. R. Storer, President of the Newport Medical Society.

Dr. Storer expressed the hope that the State Society would revive the early custom of holding alternate, or at least occasional, meetings in Newport.

Dr. Griswold, referring to the public spirit and activity of the profession in Connecticut cited, in illustration, the Medical Tramp Act, which protects the State from illiterate roaming medical men.

CORONERS AND MEDICAL EXAMINERS.

The President presented a communication from the Newport Medical Society, accompanied by the draft of a law pertaining to the abolition of the coroner system in this State, and the substitution therefor of a system of medical examiners, similar to the system which has worked so well during the past six or seven years in Massachusetts.

This draft of an act was presented to the General Assembly at the May session, referred to the Judiciary Committee, and lies over until the next meeting of the Legislature. The profession in Newport, who initiated the movement, ask the State Society to coöperate in securing the enactment of this much-needed law.

After considerable discussion as to the most effective action that could be taken, the communication was referred to the following committee, with instructions to report at the next quarterly meeting: Drs. Ariel Ballou, S. W. Francis, and J. W. Eldredge.

The Society directed the Secretary to have two hundred copies of the proposed law printed for the use of the Fellows, and the President urged each Fellow to use his personal influence with the representatives of his town in behalf of this reform.

Newport was selected as the place for the next quarterly meeting.

Dr. J. W. C. Ely was appointed Anniversary Chairman for 1884.

At 1 P. M., the President delivered the annual address, the subject being Rational Therapeutics.

Following adjournment, the Society, with guests, sat down to dinner in Spink's Hall, Dr. Samuel W. Francis presiding gracefully as toastmaster.

AMERICAN NEUROLOGICAL ASSOCIATION.

The ninth annual meeting was held at New York, June 20, 21, and 22, 1883.

FIRST DAY.

The Association was called to order Wednesday, June 20th, at 2.30 P. M. by the retiring President, Dr. Hammond, of New York, who introduced the President-elect, Dr. Robert T. Edes, of Boston, who gave the President's Address.

A letter was read from Dr. E. C. Seguin, resigning the secretaryship.

The following gentlemen were elected members: Dr. L. Weber, of New York; Dr. G. L. Walton, of Boston; and Dr. J. T. Eskridge, of Philadelphia.

Dr. R. W. Amidon, of New York, was elected secretary *pro tem.*, and then read his annual report.

ELECTION OF OFFICERS.

Officers for the coming year were elected as follows: President, Dr. Isaac Ott, of Easton, Penn.; Vice-

President, Dr. W. R. Birdsall, of New York; Secretary and Treasurer, Dr. R. W. Amidon, of New York; Council, Dr. V. P. Gibney and Dr. W. J. Morton, of New York.

THE LATE DR. BEARD.

Dr. C. L. Dana and Dr. C. K. Mills were appointed to draft resolutions commemorative of the late Dr. George M. Beard.

DR. W. J. MORTON, of New York, read a paper on

NEURITIS FOLLOWING DISLOCATION AT THE SHOULDER.

The patient referred to was sixty-five years of age, and had dislocated the right shoulder. The dislocation was reduced, and the following condition of things was found afterward to exist in the right hand and wrist: Pain and swelling; the skin glazed, mottled, cold, and œdematous; the nails club-shaped; the joints of the limb painful; impairment of motion, neuro-muscular super-excitability. Afterward there was a transfer of these symptoms to the opposite membrane. Dr. Morton considered the case one of neuritis, commencing in the injured brachial plexus, and ascending to the spinal chord; hence the transfer of symptoms to the left arm.

The paper was discussed by DR. PUTNAM, DR. MILLS, DR. GIBNEY, DR. WEBER, and DR. HAMMOND. DR. WEBER, speaking of treatment, had not produced benefit in similar cases from electricity, but had found decided benefit from blisters.

DR. HAMMOND advised complete rest of the affected nerves and their centres; and, to accomplish this, he practiced nerve-stretching. Electricity did harm by excitation. DR. PUTNAM applied ice.

DR. C. L. DANA, of New York, read a paper on

HYDROBROMIC ACID AS A SUBSTITUTE FOR THE BROMIDES.

During the past two years he had employed hydrobromic acid in various conditions. He had seen the greatest benefit from the drug in epilepsy, in post-hemiplegic difficulties, and in other lighter general nervous troubles. It did not prevent cinchonism, certainly not in the small doses in which it was usually prescribed. Hydrobromic acid was recommended in preference to the haloids, because it was agreeable to take, non-irritating, and did not produce an eruption or bromism.

DR. HAMMOND had found the haloid salts more effective in nearly or quite all conditions in which the bromides were indicated He had employed only the weaker, or Fothergill's, solution of hydrobromic acid, and, contrary to Dr. Dana's experience, it had prevented cinchonism, although bromide of potassium was more effective.

LEAD POISONING SIMULATING OTHER FORMS OF DISEASE.

A paper was read by DR. J. J. PUTNAM, of Boston, relating eight cases resembling different forms of chronic and sub-acute myelitis, but afterward proved, by examination of the urine and by other facts, to be cases of lead poisoning. One case simulated cerebral disease. Certain sources of error in the detection of lead in the urine were pointed out.

DR. J. T. ESKRIDGE, of Philadelphia, related

A CASE OF GENERAL NEURALGIA.

The question of diagnosis was uncertain; polio-myelitis, myelitis, syphilis, and general neuralgia each had been suggested.

DR. WEBER, of New York, related a similar case, occurring in a man forty-five years of age, in whom he made the diagnosis of polio-myelitis, a number of cases of which had been reported by German physicians, and had been successfully treated. He looked upon the case narrated by the author of the paper as one of lepto-meningitis.

DR. ESKRIDGE thought that, if the case were one of lepto-meningitis, the electrical current would cause pain, which it did not.

DR. C. K. MILLS, of Philadelphia, read

A CASE OF LOCOMOTOR ATAXIA TERMINATING AS GENERAL PARALYSIS OF THE INSANE.

The patient was a man, forty years of age, of strong constitution until about eight years ago, when he began to suffer from symptoms pronounced to be rheumatic, for which he continued to be treated for three years. There had been chancre, but no secondary or tertiary symptoms had manifested themselves. The patient was addicted to venereal excess and to alcohol. A detailed description was given of the symptoms of locomotor ataxia, which developed gradually and became typical, and then passed on, after about four years, to present typical symptoms of general paralysis of the insane. The patient died eight years after the commencement of so-called rheumatic symptoms. A minute microscopical examination was made. Throughout the spinal cord there was marked sclerosis, more marked in the lumbar region, also inflammation of the pia mater throughout. There was sclerosis of the pons, of the optic thalami, and of the cerebral convolutions examined.

The paper was discussed by various gentlemen, after which the discussion of DR. PUTNAM'S paper was taken up, and was participated in by DR. WEBBER, DR. MILLS, and the author.

THE ALLEGED RELATION OF SPEECH DISTURBANCE AND THE PATELLAR TENDON REFLEX IN PARETIC DEMENTIA.

DR. E. C. SPITZKA, of New York, began by referring to a paper in which it had been maintained that there was a relation between speech disturbance and the abolished tendon reflex in general paralysis of the insane. Eighteen cases were read, the majority of which conflicted with the theory.

The paper was discussed by DR. SHAW and the author.

SECOND DAY.

A paper was read by the President, DR. EDES, of Boston, on the

EXCRETION OF PHOSPHITES AND PHOSPHORUS AS CONNECTED WITH MENTAL LABOR.

The paper was discussed by DRS. JEWELL, HAMMOND, PUTNAM, and the author. The opinion was general that the connection assumed by some between phosphorus excretion and mental labor was not only *a priori* absurd, but also had no valid experimental foundation.

DR. AMIDON, of New York, read a paper entitled A

Case of Tetanoid Paraplegia, of Interest from an Ætiological and Pathological Point of View.

DR. AMIDON then exhibited two cases of

PARKINSON'S DISEASE (PARALYSIS AGITANS),

one a typical case, the other typical in other respects, including the immobile countenance, but lacking the tremor.

DR. PUTNAM spoke of the difficulty sometimes occurring of diagnosticating this disease from multiple sclerosis.

DR. WEBBER, of Boston, read a paper describing several cases of

TABES DORSALIS

presenting peculiar symptoms.

DR. HAMMOND agreed with the reader on the importance of rest in treatment, and described a case in which he considered that cure had been brought about by absolute rest for a year on account of the maltreatment of a broken thigh.

DR. JEWELL coincided with regard to the importance of rest.

DR. WALTON remarked that cases were very rare in which, as in the one reported by Dr. Webber, the deafness could be attributed to lesion of the nerve, and alluded to the importance of the careful examination of the ears to exclude external aural disease.

DR. MORTON, of New York, exhibited an instrument for

THE TREATMENT OF WRITER'S PALSY,

which consisted of a long thimble holding the pen on its end. Gentle extension was made by an elastic band passing round the wrist and over a knob on the dorsal side of the thimble.

The disease and its treatment were discussed by DRS. WEBBER and PUTNAM.

A communication by DR. SEGUIN, of New York, on the Insane of Spain and their Asylums was read by title, after which the meeting was adjourned.

(To be continued.)

— Dr. Matthews Duncan, having alluded in a recent number of the *British Medical Journal* to the practice of "bundling" as common in Wales, and as a fair exponent of Welsh morality, is vigorously contradicted by a defendant of the Welsh, who suggests to Dr. Duncan that he examine the morals of his own country, and intimates that a publication of the comparative statistics of illegitimacy in Scotland and Wales will not show to the discredit of the latter country. For the benefit of those who may not recall the description of "bundling" given by an American author we quote from Dr. Duncan: "The practice is called bundling or keeping company, and consists in parents permitting daughters to cohabit with an eligible man on the understanding that if pregnancy ensues the legal marriage is made. A woman proving sterile may be deserted by her follower, and gets another with whom the result is different."

— The Maine Legislature at its recent session passed an act prohibiting the sale of toy pistols. The cap which causes the explosion was not included in the legislation.

Medical and Surgical Journal.

THURSDAY, JUNE 28, 1883.

A Journal of Medicine, Surgery, and Allied Sciences, published weekly by HOUGHTON, MIFFLIN AND COMPANY, *Boston. Price, 15 cents a number: $5.00 a year, including postage.*

Communications for the Editors, and all books for review, should be addressed to the Editors of the Boston Medical and Surgical Journal.

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DISEASE AND CRIME.

THE fifty-third annual report of the inspectors of the State Penitentiary for the eastern district of Pennsylvania, for the year 1882, contains, in addition to excellent remarks in regard to the rational treatment of its convicts by a State, tables showing relationship between crime and hereditary diseases, and especially the transmitted diseases known as neuroses, among the prisoners received during the year; the health of the prisoner on admission is also given.

We reproduce a small unselected portion of such a table, as it tells its own story, and needs no comments: —

Convict's No.	Crime.	Number of convictions.	Health on Admission.	Heredity.
1072	Larceny	2	Impaired.	Phthisis in family.
1078	Tramp	1	Impaired.	Epilepsy in family.
1092	Larceny	4	Impaired.	Phthisis in family.
1101	Larceny	1	Impaired.	Mother died of phthisis, cousin insane.
1111	Perjury	2	Impaired.	Phthisis in family.
1112	Aggravated assault and battery	1	Good.	Phthisis in family.
1113	Burglary, attempted felony	1	Good.	Phthisis in family.
1114	Larceny	2	Impaired.	Phthisis in family.
1116	Larceny	1	Impaired.	Phthisis in family.
1121	Robbery	1	Good.	Epilepsy in family.
1133	Murder, second degree	1	Impaired.	Insanity and epilepsy in family.
1135	Horse stealing	1	Good.	Epilepsy in family, brother.
1140	Larceny	3	Impaired.	Phthisis in family.
1145	Burglary	1	Good.	Sister phthisis, and mother cancer.
1148	Larceny	1	Good.	Phthisis in family.
1151	Larceny and receiving	1	Impaired.	Epilepsy in family.
1157	Larceny	1	Impaired.	Sister epilepsy and phthisis, twin.
1159	Larceny	1	Impaired.	Two aunts insane, one aunt epilepsy.
1162	Robbery	3	Impaired.	Phthisis in family.
1165	Larceny	5	Impaired.	Phthisis in family.
1168	Larceny	4	Impaired.	Phthisis in family.
1172	Robbery	2	Good.	Phthisis in family.
1175	Larceny	1	Impaired.	Epilepsy in family.
1181	Larceny	4	Good.	Epilepsy in family.
1184	Larceny	1	Impaired.	Phthisis in family.
1185	Manslaughter	1	Impaired.	Phthisis in family.
1186	Making, having, and passing counterfeit currency	1	Good.	Phthisis in family
1190	Burglary	1	Impaired.	Phthisis in family.
1191	Burglary	1	Impaired.	Phthisis in family.
1196	Bigamy	1	Impaired.	Sister phthisis, father and sister epilepsy.

On January 1, 1883, from the Warden's records, there were 143 convicts imprisoned, who had been convicted and imprisoned three or more times and served their sentences; of these 23 gave their family

health-history as being good, 73 as being bad, and 34 did not know anything reliable about their family health-history; 13 knew nothing at all. Of these, of course, only the 73 bad, and the 23 good-health histories, or 96, can be relied upon as bases of estimate of relationship between inherited bad-health tendency and crime history, which shows the interesting large percentage of over seventy-six per cent. with bad-health histories in criminals of three or more convictions. Great care is reported to have been taken in interviewing each convict to have the statements as correct as possible.

Of the 417 prisoners received in 1882 it is reported that 76 were total abstainers.

In the year 1881 there were 63 prisoners in the penitentiary who were admitted with inherited mental, physical, or criminal taints. The table for 1882 presents the fact that 106 prisoners were in the penitentiary who were so diseased. The whole number appearing in the tables for both 1881 and 1882, was 169.

The inspectors comment upon these facts to the following effect: —

"It is difficult at the time of sentence for the court to be advised of the condition of these individuals. The strict examinations made at the Penitentiary by the warden, the medical officer, the clerk, moral instructor, and the overseers give this information. How far such cases should be subject to imprisonment is a serious question. That they should not be associated with young or first offenders, or persons that were not, at the time of their conviction, of the crime class, or congregated in shops to toil for punishment, is beyond controversy. In a majority of the cases noticed in this table, imprisonment is a curative process, but the cost of support is from the first a fixed certainty."

Preventive medicine is worth many policemen and much machinery for conviction and incarceration.

MEDICAL NOTES.

— In a murder trial at St. Johnsbury, Vermont last week, a prominent physician of that place was called to testify on the part of the prosecution. The doctor made a post-mortem examination of the alleged murdered man. He was asked what, in his opinion, was the cause of death. He refused to answer on the ground that it was requiring him to give expert testimony without having been paid for it. The court, Hon. J. Ross, ordered him to be committed to jail for contempt of court unless he answered the question. The doctor declined to answer, and was committed to jail by the sheriff. The other physicians who were present at the post mortem when asked the same question answered that they had no opinion, and by so doing avoided being also committed. Later in the day the witness, seeing no alternative, submitted to the decision of the judge, and answered all questions as an expert witness that were put to him. He was then discharged by order of the court. The medical profession has by custom and sufferance long yielded unrequited services to the community, but for a Commonwealth to extort such services in her behalf with no compensation is as unjustifiable as it is petty.

— There has been successfully established in London a museum of hygiene, where men and women can study hygienic principles by lectures, books, and models. At the dedication of the museum a short time ago Professor Tyndall proposed that the institution be made a "repository for models of all contrivances and inventions which are calculated to promote the health, comfort, and general well-being of the poor." And the Duke of Albany asserted that one object of the Parkes Museum was to make the principles of health familiar to the many, and that the arts of construction and the subjects of food, clothing, etc., would be taught. If the institution is properly conducted there is little doubt of its being of great use to the people of London directly, and indirectly to the whole world, in advancing the cause of hygiene.

— It was stated before the National Health Society in London the other day that "the gain in life" in England had not been less than two thou[illegible] alcohol. the last ten years. In other words th[illegible]ptoms of has been so reduced that the saving of l[illegible] and be- 48,000 annually, or 480,000 in ten years. [illegible] money saving for funerals and sickness is estima[illegible]d at $20,000,000. The sum thus saved becomes available for other purposes and represents a vast increase of comfort, especially for the working classes.

— "How old are you, Jacob?" asked the doctor of an aged Austin Israelite whom he had been called to attend in a professional capacity, and who is a broker whose mind runs on the fluctuation of the market. "I vash seventy-two years old," was the reply. "You may live to be eighty years of age." "I vash afraid not Mishter Doctor," replied Jacob. "Vy should the Lord vant to dake me at eighty ven he can dake me now at seventy-two?" — *Texas Siftings.*

— Dr. Alexander, in a series of articles in the *Medical Times and Gazette* on the management of parturition and the puerperal state, remarks on the habits of nurses to have each some special point which she considers of importance in the management of labor cases, and which, in her ignorance of the true principle involved, she is apt to overdo, or to do wrongly. For instance, one dreading hæmorrhage will compress every uterus; another will drench every woman with cold water, etc. He says the best plan of finding out these faults is to "blow up" the nurse generally when troubles arise that we cannot get at the origin of, and wherever she in her self-defense shows herself to be most zealous, it is *there* we must look for the errors that are producing the mischief.

— The *Ceylon Observer* reports that the practice — now pursued for some years — of "shaving" bark off living cinchona trees has not been productive of any ill effects. On the contrary, the bark "renews" with even a larger percentage of alkaloid. Some trees have been thus treated on five successive occasions without their vitality having, to all appearance, been in the least impaired.

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